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STATISTICAL,

DESCRIPTIVE AND HISTORICAL ACCOUNT

OF THE

NORTH-WESTERN PROVINCES OF INDIA.

PREPARED, UNDER ORDERS OF THE GOVT. OF INDIA,

BY

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BENGAL CIVIL SERVICE.

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VOL. III.

MEERUT DIVISION:

PART II.

ALLAHABAD:

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PREFACE.

THE prefaces to the first two volumes explain the origin and object of the present work. I have here merely to repeat that it is intended primarily as a work of reference for District officers and Indian publicists, and that the historical and ethnographical notices only aim at giving information sufficient to render the fiscal and economical history of each district more intelligible. The system of transliteration followed is that laid down in the *North-Western Provinces' Gazette* for October 3, 1874, (pages 1732-33), and for convenience of reference is reproduced here :—

RULES FOR TRANSLITERATION.

Every letter in the vernacular must be uniformly represented by a certain letter in the Roman character as follows :—

Vowels.

PERSIAN.		DEVANAGARI.		ROMAN.	PRONUNCIATION.
Initial.	Non-initial.	Initial.	Non-initial.		
ا	◌َ (zabar)	अ	not expressed.	a	As in woman.
آ	ا	आ	ा	á	„ father.
اِ	◌ِ (zer)	इ	ि	i	„ bit.
اِی	◌ِ or ◌ِی	ई	ी	í	„ machine.
اُ	◌ُ (pesh)	उ	ु	u	„ pull.
اُو	◌ُ	ऊ	ू	ú	„ rude.
اے	◌ِ or ◌ِی	ए	े	e	„ grey.
اَے	◌َ ◌ِ	ऐ	ै	ai	„ aisle.
اَو	◌َ or ◌َو	ओ	ो	o	„ hole.
اَو	◌َ ◌ُ	औ	ौ	au	As *ou* in house (nearly, being a combination of the a and u above).
			॰		

Consonants.

PERSIAN.	DEVANAGARI.	ROMAN.
ب	ब	b
بھ	भ	bh
چ	च	ch
چھ	छ	chh
د or ڈ	द or ड	d
دھ or ڈھ	ध or ढ	dh
ف	wanting	f
گ	ग	g
گھ or غ	घ	gh
ج	ज	j
جھ	झ	jh
ک or ق	क	k
کھ or خ	ख	kh
——	क्ष	ksh
ل	ल	l
م	म	m
ن	न, ञ, ङ, ण or anuswara	n
پ	प	p
پھ	फ	ph
ر or ڑ	र or ड़	r
ڑھ	ढ़	rh
ص or س . ث	स	s
ش	श or ष	sh
ط , ت or ۃ	त or ट	t
تھ or ٹھ	थ or ठ	th
و	व	w or v
ی	य	y
ظ or ض , ز , ذ	wanting	z
ژ	ditto	zh
ع	ditto	omitted, the accompanying vowel only being expressed.
——	ज्ञ	gy

For the Bulandshahr District my acknowledgments are chiefly due to Kunwar Lachman Singh, Deputy Collector, and Mr. F. Pollen, C.S., for their valuable assistance in the preparation of the geographical and ethnographical sections of the district notice and the description of the towns of the District. The parganah notices are based on the Settlement Report of Mr. R. Currie, C.S., and the records of the Board of Revenue. For the Meerut District, I have cordially to acknowledge the aid afforded me by Mr. S. H. James, C.S., especially in all matters relating to agriculture and rural economy. His notes have formed the basis of a great portion of the district notice, and he has further assisted me in passing the Meerut District through the press. The generous and steady co-operation of Mr. Alan Cadell, C.S., has enabled me to complete the Muzaffarnagar notice, and without that assistance I fear that I should not have been able to arrange the scattered facts, which, taken together, form the fiscal history of that district. With many grave demands upon his time and attention, he has been able to examine the proofs of each sheet while passing through the press, and has in many cases pointed out useful additions and corrections. Mr. G. R. C. Williams, C.S., has also rendered me some assistance in portions of the notice of the Muzaffarnagar district. It is impossible for me to acquire that local knowledge of every district which should absolutely prevent the intrusion of errors of detail, but I have endeavoured to guard against them by submitting the proofs in every instance to the District officers concerned. Thus, in Bulandshahr, Mr. F Pollen; in Meerut, Messrs. H. D. Webster and S. H. James, and in Muzaffarnagar Messrs. A. Cadell and W. R. Burkitt have examined every page before final printing, and I trust that, in this way, the chances of error have been reduced to a minimum.

ALLAHABAD,
December 17, 1875.

E. T. ATKINSON.

FOR THE NORTH-WEST PROVINCES GAZETTEER.

District of BULANDSHAHR

Scale 8 St. Miles or 1 Inch.

REFERENCES.

Capital Towns ... Dist. G. T. Stations
Tahsils ... Roads Metalled
Police Stations ... Unmetalled
Post Offices ... Villages
Ghâts ... Footways

LITHOGRAPHED AT THE SURVEYOR GENERAL'S OFFICE, CALCUTTA, MAY 1870.
From an original supplied by R. T. Atkinson, Esqr. in charge of the N. W. P. Gazetteer.

STATISTICAL AND DESCRIPTIVE ACCOUNT

OF THE

NORTH-WESTERN PROVINCES.

BULANDSHAHR DISTRICT.

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BULANDSHAHR,[1] a district in the Meerut Division, is situated in the upper Duáb, between the Ganges on the east, the Jumna on the west, the district of Meerut on the north, and

Boundaries.

[1]The authorities for this notice are Mr. R. Currie's Settlement Report; Kunwar Lachhman Singh's Memoir for castes; notes by Mr. F. Pollen, C.S.; and the records of the Board of Revenue. Mr. Currie is the main authority for the parganah notices. See also N.-W. P. Rec., Pt. XXIV. 196; J. A. S., Ben., XXXVIII., (I), 21; and Dr. Planck's Sanitary Reports.

the district of Aligarh on the south. The Jumna separates it from the districts of Dehli and Gurgaon in the Panjáb and the Ganges from Moradabad and Budaon in Rohilkhand. It lies between north latitude 28°-2′-45″ and 28°-43′, and east longitude 77°-25′ and 78°-32′-30″, with an area of 1,219,921 acres, or 1,906·20 square miles, of which 1,368 square miles are cultivated.[1] The population in 1872 numbered 936,593 souls, of whom 760,602 were Hindús and 175,900 were Musalmáns, giving 490 inhabitants to the square mile. The average length of the district is thirty-five miles from north to south, and the average breadth from east to west is fifty-five miles.

Administrative divisions.

The following statement gives the administrative divisions of the district, with their present area, revenue, and population:—

Present tahsíl.	Includes		Number of estates in 1874.	Land-revenue in 1872.	Area in acres in 1872.	Population in 1872.	In the police jurisdiction of station.
	Parganah.	Entered in the *Aín-i-Akbari* in		Rs.			
I.—Bulandshahr or Baran.	1. Agauta ...	Sentha ...	120	97,900	64,246	62,161	Galáothi.
	2. Baran ...	Baran ...	176	1,19,312	89,567	90,230	Bulandshahr.
	3. Shikárpur	Shikárpur ...	125	62,723	61,710	42,523	Aurangabad, Shikárpur.
	4. Sayána ...	Sayána ..	93	1,08,878	89,822	69,451	Sayána.
II.—Anúpshahr.	5. Ahár ...	Ahár, Thána Farida.	145	91,267	91,918	61,048	Khánpur, Ahár.
	6. Anúpshahr	Malakpur ...	115	92,374	77,158	69,573	Anúpshahr, Jahángírabad.
	7. Dibái ...	Dibái ...	186	1,39,213	115,416	83,057	Dibái, Rámghát.
III.—Khúrja,	8. Khúrja ...	Khúrja ...	181	1,49,110	123,176	107,221	Khúrja.
	9. Pahásu ...	Pahásu ...	116	92,730	81,367	56,636	Pahásu, Arniya.
	10. Jewar ...	Jewar ...	117	93,739	89,3·4	57,319	Jewar.
IV.—Sikandarabad.	11. Sikandarabad.	Sikandarabad, Ada.	191	1,06,216	100,959	91,988	Sikandarabad
	12. Dankaur ...	Dankaur ...	120	72,201	96,774	57,179	Dankaur, Jhájar, Kásna.
	13. Dádri ...	Kásna, Tilbogampur, Shakrpur, &c.	209	1,40,539	138,494	88,207	Surajpur, Saráí Sadr, Dádri, Járcha.
	District Total ...		1,893	13,66,202	1,219,921	936,593	

[1] The Settlement Report gives 1,908 square miles as the result of the plane-table survey, and the census of 1872 shows 1,910 square miles; the area given in the text is taken from the district records. The area in 1848 was returned at 1885 square miles, and in 1853 at 1,823·6 square miles.

Territorial changes.

Of the subdivisions or mahâls lying within the modern district of Bulandshahr, the mahâls of Shikârpur, Ahâr, Malakpur, Dibâi, Khûrja, Pahâsu, and Thâna Farîda, forming dastûr Thâna Farîda, were in the reign of Akbar comprised in the sirkâr of Koil and súbah of Agra or Akbarabad: to sirkâr Dehli and súbah Dehli were attached the mahâls of Ada, Baran, Tilbegampur, Sayâna, Jewar, Sikandarabad, Dankaur, Kâsna, Shakrpur, and Sentha, comprising dastûrs Baran and Haweli. Of the mahâls that disappeared or sprung into existence between the time of Akbar and the British occupation in 1803, that of Sentha is now known as parganah Agauta, and changed its name owing to the removal of the parganah capital to Agauta by the Marhattas. The village of Sentha, which formerly gave its name to the parganah, still exists on the right bank of the Kâli Nadi, about four miles west of Agauta. This parganah was known during the early settlements sometimes as Sentha Partâppur and sometimes as Mâlâgarh. Anûpshahr was formed out of Malakpur in the reign of Jahângîr, and was conferred on the Badgûjar chief Anûp Râi. The remainder of Malakpur continued under that name until 1817, when it was transferred to Meerut and absorbed in parganah Ahâr. Dâdri was not formed into a separate parganah until the time of Shâh Alam, who gave the 133 villages comprising the parganah to Rao Dargâhi Singh of Chhatâra, a Bhatti Gûjar. In 1231 *fasli* (1823-24 A.D.)[1] these villages were transferred intact from the Meerut district to the newly formed district of Bulandshahr. The parganah was originally made up of portions of Sikandarabad, Kâsna, Tilbegampur, and Dâsna, and in 1844 Shakrpur was added to it.[2]

Formation of the district.

Except the parganahs of Anûpshahr and Jahângîrabad, which formed a part of Moradabad ceded in 1801, the remainder of the district was conquered from the Marhattas in 1803, and formed portions of the Aligarh district and the southern division of Saháranpur (Meerut) until 1817-18, when Sikandarabad, Tilbegampur, Ada (Ara), Dankaur, Kâsna, Baran, Mâlâgarh (Agauta), and Ahâr Malakpur were transferred to Meerut. In 1823-24 these same parganahs formed the nucleus of the new district of Bulandshahr, to which were added from Aligarh parganahs Dibâi, Shikârpur, Anûpshahr, Jahângîrabad, Khûrja, Pîtampur (part), and Ahmadgarh; and from Meerut parganahs Shakrpur, Thâná Farîda, and Dâdri. In 1836 Jewar and Pahâsu lapsed by the death of Begam Sumru, and in 1842 Sayâna was received from Meerut. Portions of Pahâsu (28 villages) were transferred to other parganahs on its annexation. Jahângîrabad was absorbed in

[1] See Board's Records, 28th January, 1824, No. 8; 15th September, 1821; 28th November, 1823; 12th September, 1825, No. 12A; 19th September, 1825, No. 2; and 4th August, 1828, No. 3.

[2] For a more detailed account of each parganah, see the alphabetical arrangement in the *Gazetteer* portion of the notice of this district.

Anúpshahr in 1844; Thána Farida in Ahár, and Ada and Tilbegampur in Sikandarabad, while Pítampur and Ahmadgarh were added to Pahásu, and Kásna was absorbed in Daukaur in 1844. In 1850 A.D., 54 villages of Dádri lying between the Hindan and the Jumna were transferred to the Dehli district, and were received back again in 1859. In 1859 the *taiúl sháhi* grant of tappa Rabupura was confiscated and was annexed to Jewar (17) and Khúrja, making altogether 13 parganahs, divided amongst four tahsíls as at present. A few changes in the distribution of parganahs into tahsíls took place in 1859: when the head-quarters of tahsíl Dibái were transferred to Anúpshahr, parganah Ahár was transferred to tahsíl Anúpshahr, parganah Shikárpur to Baran, and Pahásu to Khúrja. Since then no change of importance has taken place in the distribution of the fiscal subdivisions of this district.

The Munsif of Bulandshahr has original civil jurisdiction over the Baran, Anúpshahr, and Khúrja tahsílis, and the Munsif of Gháziabad, in the Meerut district, has jurisdiction over the Sikandarabad tahsíli. The Civil Judge of Meerut has appellate civil and criminal jurisdiction, and forms the court of sessions for the district. There are thirty-two police-stations of all classes, most of which are noticed under the name of the town in which they are situated. All these stations are under the supervision of a resident District Superintendent of Police. The number of Magisterial Courts in 1860 was nine, and in 1870 was eighteen; the number of civil courts, including revenue courts and Deputy Collectors empowered to hear rent suits, in 1860, was seven, and in 1870 was eight; the number of covenanted officers at work in 1860 was three, and the same number held office in 1870. In 1874 the district staff comprised the Magistrate and two Covenanted Assistants, a Deputy Collector, four Tahsíldárs, eight Honorary Magistrates, a Munsif, a Deputy Inspector of Customs, a Civil Surgeon, a District Superintendent of Police, a Deputy Inspector of Schools, and a Civil Surgeon, who is also Deputy Magistrate at the head-quarters of the Lower Ganges Canal establishment at Narora.

General appearance.

The general surface of the country in this district presents an almost uniform level appearance, with a gradual slope from north-west to south-east, as indicated by the Ganges and Jumna, as well as by the Káli Nadi and all the lines of drainage. This slope is about eighteen inches in the mile, and the elevation above the level of the sea varies from 680·52 feet at Galáothi in the north-east to 636 feet at the last milestone of the Dehli road in this district towards Aligarh on the south. The station of Bulandshahr lying close to the centre of the district is 727·15 feet above the level of the sea and 843 miles by road north-west from Calcutta. The soil of the district is principally a rich loam called *seota*, the distinctive feature of which is that it dries white or to a very light grey, and becomes of a dark rich colour when moistened by rain or irrigation. The poor sandy soil of the district

is invariably to be found all along the high banks of the Ganges and Jumna which divide the *bángar* or uplands from the *khádir* or bed of the river. These strips of light sandy soil and uneven land extend to the distance of a mile and a half or two miles inland from the high banks and ravines. There is also a ridge of yellow sandy soil which passes down the entire length of the district through the western parganahs. In places it throws off spurs and almost disappears, but soon again shows itself, and is easily traceable throughout parganah Dádri between Shádípur-Chandauli and Kalda, where it enters the parganah, and Lohárli and Tilbegampur, where it separates, one branch proceeding along the boundaries of parganahs Sikandarabad and Dankaur. Again dividing above Jhájar, one ridge passes through Jewar and the other runs through Khúrja. There is also another sandy ridge running through the centre of the eastern portion of parganah Baran, and on through Shikárpur into Pahásu. The spur which goes off from the main ridge near Kot and across to the north-east of Sikandarabad is traceable the whole way down to Khúrja, and through it between the Grand Trunk Road and the canal into the Aligarh district.

Dhák (Butea frondosa) jungle tracts are to be found on the western side of parganah Sayána and in the adjacent villages of Agauta, and these extend into Ahar and Baran, and through the western corner of Anúpshahr into Shikárpur, and on along the boundary of Shikárpur and Anúpshahr into Pahásu, and through the villages on either side of the parganahs of Pahásu and Dibái into the Aligarh district. In places this *dhák* jungle is dense and the trees are large, and generally the land is good, but much of the best has been redeemed and brought under the plough, and, as a rule, only the worst has been left. There is no similar tract of *dhák* jungle on the Jumna side of the district. In tappa Rabupura and the adjacent villages about Rabupura and Diyánatpur there are large tracts of land covered with *dhák* jungle, thorn and other bushes. Most of this land is very good, and must in process of time be brought into cultivation: hitherto, however, it has been by no means unremunerative. The *dhák* wood,[1] gum, and grass are all very valuable, and herds of cattle graze here, also a number of camels, all of which pay *púnchi* or "tail money" to the zamindárs.

Barren plains.

Usar plains are found in almost all the parganahs of this district, but especially in parganah Khúrja. There they stretch for miles through several villages, and are quite barren and incapable of producing any crops at all, not even grass. These plains become quite white in December or January, and give the appearance of newly

[1] The *dhák* wood is extensively used for cylinders for wells, but for little else except fuel. It burns very quickly, throwing out comparatively little heat, and is largely converted into charcoal. The tree affords gum which is used in the manufacture of indigo, and a red dye is obtained from the flower. The bark is used for tanning purposes. See further supplementary volume on the vegetable products of these provinces.

fallen snow, and often by producing mirages look like vast lakes of water. The white appearance is caused by a bloom or efflorescence which spreads everywhere after the rainy season is well over and the cold season far advanced, and remains until again washed away by the rains. Where the efflorescence is abundant no vegetation will thrive, nor is the soil culturable by the ordinary methods pursued by the natives of this country. *Reh* is found chiefly in the low land, and in the upland in hollows where water lodges after rain. There are few level tracts covered with *reh* in the upland, there are more in the lowland, and most in land cut up by ravines. There is some land in this district where *reh* does not effloresce, but which is still nevertheless unculturable. Such land however contains saline matter which gives a whitish appearance to the surface of the soil, but no *reh* lies above. In such soil no crop is raised, nor does grass grow thereon. There is a third kind of soil showing no signs of saline matter, except by its extreme hardness, but yet producing scarcely anything except grass.

Heights.

The following table of ascertained heights above the level of the sea in this district is compiled from the records of the Great Trigonometrical Survey (see further under Bulandshahr, Bostán, and Karol in the alphabetical arrangement):—

On the Meerut and Aligarh road—

	Feet.
Galáothi bench-mark	680·52
Top of the 28th milestone from Meerut	688·71
Ditto 29th ditto ditto	686·62
Ditto 30th ditto ditto	687·46
Ditto 31st ditto ditto	685·29
Ditto 32nd ditto ditto	683·06
Ditto 33rd ditto ditto	681·38
Ditto 34th ditto ditto	678·71
Ditto 35th ditto ditto	675·67
Ditto 36th ditto ditto	673·77
Ditto 37th ditto ditto	669·95
Ditto 38th ditto ditto	672·43
Ditto 39th ditto ditto	672·38
Ditto 40th ditto ditto	669·97
Junction of Dehli and Meerut roads, top of stone	667·00
Top of the 41st milestone from Meerut	669·15
Ditto 42nd ditto ditto	670·73
Walipur canal bridge, level of spring of arches	673·71
Walipur bench-mark in front of toll-office...	670·78
Bulandshahr bench-mark	727·15
Top of 43rd milestone on Meerut road	672 80
Ditto 44th ditto ditto	667·24
Ditto 45th ditto ditto	664·03
Ditto 46th ditto ditto	669·55
Ditto 47th ditto ditto	659·11

	Feet.
Top of 48th milestone on Meerut road	656·67
Ditto 49th ditto ditto	656·17
Ditto 50th ditto ditto	653·56
Ditto 51st ditto ditto	652·61
Ditto 52nd ditto ditto	651·01
Ditto 53rd ditto ditto	655·16
Khúrja bench-mark	647·76
Top of post on 52nd mile from Dehli	648·47
Ditto 53rd ditto	652·43
Ditto 54th ditto	648·40
Ditto 55th ditto	645·86
Ditto 56th ditto	643·87
Ditto 57th ditto	639·24
Ditto 58th ditto	638·01
Top of stone 59th mile from Dehli	640·53
Ditto post 60th ditto	639·63
Ditto stone 61st ditto	643·44
Ditto 62nd ditto	636·24
Ditto post 63rd ditto	636·00

Soils.

The natural divisions of the soil are four—*dákra*, *seota*, *pilota*, *and bhúr*, besides the *khádir* or river beds. The following are the details of these soils in acres collected in 1865 in the revenue-paying villages and the corrected totals of the final report:—

Soil.	Irrigated.	Unirrigated.	Total.	Corrected total.	Soil.	Irrigated.	Unirrigated.	Total.	Corrected total.
Dákra ...	31,011	30,737	61,754	61,162	Bhúr ...	4,722	36,347	41,069	38,193
Seota ...	268,724	325,329	594,053	597,943	Khádir ...	8,319	19,224	27,543	24,233
Pilota ...	8,261	45,183	53,444	55,662	Grand Total,	321,043	456,820	777,863	777,193

From this table it appears that *seota* comprised 77 per cent. of the total cultivated area at the recent settlement; *dákra* formed eight per cent.; *pilota* seven per cent.; *bhúr* five per cent., and *khádir* three per cent. Speaking generally, *dákra*, *seota*, and *khádir* are good soils, and *pilota* and *bhúr* are poor soils.

Natural division of soils.

Dákra is a stiff dark clay, prevailing in natural dips and hollows where water collects and lies during the rains. This land remains moist after the other soils have become dry; and being situated near and around ponds and lakes is, as a rule, irrigated from them. From its clayey nature it forms into very large clods, and if once allowed to dry and cake, it cannot be cultivated until it is moistened.[1] *Seota*

[1] R. Currie's Settlement Report.

is a rich loam or mould, something like *dákra*, but with less clay in it. It varies much in fertility according as it approaches *dákra*, or is light and mixed with sand. *Pilota* is a poor friable yellow soil, generally sandy; even when it clods the particles do not bind together like *dákra*. Its distinguishing characteristics are its yellow or dark red colour and its inability to retain moisture. *Bhúr* is simply sand generally of a whitish grey colour, for when it becomes yellow it is termed *pilota*. The ridges of sandhills are composed of *bhúr* and *pilota* much intermixed; the *bhúr* being on the sides and tops of the hillocks, and the *pilota* generally on one side or the other, and not on both at the same time, nor confined to either side for any great distance. Properly speaking, that alone is *bhúr* which blows about and shifts with the wind, for where the country is level and sandy the soil is an inferior description of *seota* impregnated with *bhúr*, and this, provided it is white and not yellow, is a very fair soil. It is found very generally in two-thirds of parganah Sayána.

Conventional classification of soils.

The conventional denominations of soil in the *bángar* or uplands are *bárah*, *múnda* or *majhola* or *agla* and *jangal* or outlying lands, which are again subdivided into irrigated and unirrigated. In the lowland or *khádir* the lands are divided into *bárah*, *dofasli* or two-crop land, and *ekfasli* or one-crop land. *Bárah* is the circle of manured lands immediately adjoining the village site, and extending according to the size of the village, amount of manure and irrigation, to a distance of two, three, and sometimes even five and six fields from the village habitations. Two or three crops a year are taken off this land: all garden products are grown in it, and it pays a much higher rent than any other land. *Múnda*, *majhola*, or *agla* is the next belt beyond the *bárah*, and except in canal-irrigated villages or those in which *kuchcha* or temporary wells abound, the irrigated area is generally confined to these two. Beyond the *múnda* is the *jangal* (jungle) or tract of outlying lands.

Rivers.

The Jumna first touches upon this district opposite Dehli and flows along its south-west border for fifty miles. The Ganges flows along the north-east frontier for forty-five miles. The Hindan crosses the northern boundary of the district, and taking through its north-west part a tortuous course of about twenty miles, generally in a south-easterly direction, falls into the Jumna on the left bank near the village of Mangrauli in parganah Dankaur. The East Káli Nadi crosses the northern frontier and holds for fifty miles a winding course, for the most part south-easterly, until it passes into the Aligarh district.

Jumna.

The Jumna passes in its course along the borders of parganahs Dádri and Dankaur in the Sikandarabad tahsíl and parganah Jewar of the Khúrja tahsíl. The flood velocity of the river in this district is about 4½ feet per second, and in the cold weather it falls

to about eighteen inches per second. In the cold-weather the water is so clear as to be almost colourless, while in the rains it is very muddy and contains a large quantity of silt in suspension. There is no irrigation from the Jumna, and the navigation is chiefly confined to the rafting of timber and the transport of grain and cotton in small quantities. The weir thrown across the river between the villages of Nayabás on the Bulandshahr side of the river and Okhla on the Dehli side acts as a temporary bar to complete navigation. This weir forms a portion of the head-works of the Agra Canal, which was opened by Sir W. Muir in March, 1874. In the floods of 1871, when the water rose ten feet above the old level, the embankments constructed parallel to the weir to protect the surrounding country were found insufficient to withstand such a vast volume of water, and the consequence was that the country suffered much from inundation. These floods lasted from the 31st July to the end of August. The sites of five villages were entirely destroyed, of twenty-five others half were destroyed, and in twenty-five more, portions were washed away. The *kharíf* crops were destroyed, but there was a bumper *rabi* harvest. Measures have, however, been taken to avoid this danger in future. Inundation when not too severe, as it was in 1871, is undeniably a cause of fertility, but when too strong the waters carry away the crops and leave the land water-logged. The bed of the Jumna is composed of micaceous silt, and there are no rapids or even eddies except during the rains. The only affluent of the Jumna in this district, of any note, is the Hindan, and the only important towns on its banks are Dankaur and Jewar.

Ganges.

The Ganges flows along the borders of parganah Sayána of the Baran tahsíl, and parganahs Ahár, Anúpshahr, and Dibái of tahsíl Anúpshahr. The highest velocity in time of floods is twelve feet per second in the bed. The lowest in the main channel, in the cold season, is three feet per second. The bed is formed of coarse sand to thirty feet below low water, of clay and kunkur to forty-two feet, and below that to sixty feet of brown sand. The scour during the heaviest floods has not exceeded thirty feet below the level of the dry bed. In places there are reefs of block kunkur and sand or sand conglomerate, containing just enough lime to hold the sand together. The river is, like all rivers with sandy beds, subject to the formation of shoals and constant alterations of the deep channel; its course changes yearly, and large surfaces of land on the north-eastern bank are annually cut away, being replaced by banks thrown up in other places. The south-western bank alters but little, and is protected by strong headlands of hard clay and kunkur standing twenty feet above the high flood level, such as Ahár, Anúpshahr, Rájghat, and Rámghat. At the foot of these headlands there is generally a deep channel, and it is well known that some, at least, have stood almost intact for one hundred years. During the rains the river

is not fordable, and crossing by boats is at times difficult and dangerous. The water of the holy Ganges (Gangaji) is so good that even when most fully charged with silt it is drunk by the natives in preference to well water. In the rains the colour is brown with a reddish tinge, and the temperature is about 80°. In the cold weather the water is beautifully clear, with a temperature of about 50°. The Ganges is navigable generally all the year round; during February and March, however, the water is often very shallow in places. The level of the country on the left side of the river to the north-east is lower than the river-bed, and a considerable quantity of water escapes from the Ganges at a place called Biborapur, above Ahár, during the floods, and flows over the lowlying country. The banks on the south side of the river are almost perpendicular; on the north very low shelving and undefined. The principal towns situated upon the Ganges are Ahár, Anúpshahr, Karanbás, and Rámghat.

Káli Nadi.

The district is divided into two parts by the Káli Nadi, which enters it from the north near the Grand Trunk Road at Galáothi, and flowing in a southerly direction reaches Bulandshahr; after passing thence through the Bulandshahr parganah, it assumes a south-easterly course through the centre of the Pahásu parganah, finally passing into the Aligarh district at the junction of parganahs Murthal and Atrauli with parganahs Pahásu and Dibái. The Káli Nadi in this district is little more than a natural drain to carry off the superfluous water from the surrounding country, and used not to be a running stream all the year round. There is a defined valley or trough, averaging about half a mile in width, with the bed of the stream winding through it usually nearer to one bank than the other, and only at intervals in the middle of the valley. The *khádir* or low alluvial lands are however for the most part confined to one side of the stream for a distance of several miles, and further on are to be found extending for some distance on the other side. The course of this stream is very tortuous, and the turns and bends are very numerous, being in some places almost a succession of loops. Formerly there used to be no stream running except during the rains or after a fall of rain for a day or two. After the rain had drained off the bed was dry in parts, while water remained in some bends and deep hollows, and was dammed up in convenient places and used for irrigation purposes. Now there is a stream always running, and in the rains the river becomes navigable in parts for vessels of 100 maunds, though seldom, if at all, used for this purpose.

Injury caused by the river.

There has been much controversy regarding the damage done to the adjacent lands by the use of the Káli Nadi as a canal escape. Mr. R. G. Currie, Settlement Officer in the year 1865, made a special report upon this subject, in which he charged all the deterioration in the condition of the land to over-saturation, which was due to the fact that more water ran into the Káli Nadi from the canal

than it could possibly carry off.[1] He estimated the damage caused at Rs. 5,546 per annum, affecting an area of 4,257 acres, distributed over forty villages. The same officer proposed as a remedy that the bed of the Káli Nadi should be widened and the flow of the water expedited by cutting through and straightening the various loops and bends, many of them at a distance from each other of not more than 30 to 50 yards across the necks of the peninsulas made by them. Accordingly, in 1868, operations with a view to the straightening of the course of the river were set on foot by the Irrigation Department, from opposite the village of Pahásu, for a length of about 11½ miles up the windings of the river. The actual cuttings made to divert the stream into a straight channel extend close upon three miles, so that the distance through which the river flows is now 8½, instead of as formerly 11½ miles in the particular places operated upon. There seems to be no doubt of the beneficial results of these works, inasmuch as they tend to ensure a more rapid and direct flow of water than was secured in the regular bed of the river. Their effect is also to diminish the area of swamps in the time of natural floods, or in the event of a mass of water being sent down the river from any of the canal or *rájbaha* escapes, by quickening the course of the river, and so leaving less time for percolation to take effect.

In the newly excavated channel the banks are high, and the river tolerably free from grass and weeds. Mr. Currie's chief charge was against the canal escapes, but Mr. Daniell considers that it has been clearly proved that the deterioration took place during four or five years in which the escapes had been hardly used at all, and that for sixteen years previous, during all of which time they had been freely used, the land bore tolerably fair crops. Percolation from the canal may have had a share in the damage caused, but percolation must have been confined to the west side of the river, there being no canals on the east side, and deterioration took place on both sides; some assert that percolation did take place on both sides from the canal, the water from the latter penetrating beneath the bed of the Káli Nadi. Natural drainage also is said to be stopped by the canal, but this, too, can only be on the west side. The probabilities are that whilst the canal must be held answerable for some part of the deterioration caused, the real fault lies in the nature of the stream, which is so intensely sluggish and so choked up with weeds and silt that it cannot adequately drain off the water from the surrounding country, which consequently saturates and so deteriorates the land. The recent operations for the improvement of the river-bed have extended the rectification to twelve miles below Bulandshahr, and much benefit has already resulted from taking out *sirwal* (or water-weed) in this length, which, at once, lowered the water-level of the river by a foot, and so far improved its carrying capabilities. The orders of Government, in 1875, on the drainage

[1] Settlement Report, page 7.

works for this district practically acknowledge that the inundation and consequent deterioration of the villages near Kot on the Bulandshahr branch canal has been due to the obstruction to the natural drainage caused by the canal. In writing of the tract further south, it is said that "the deplorable state of the town of Khúrja and the adjacent tract, consequent on the increased amount of liberated water which now flows down upon it from the Meerut district, is acknowledged on all sides, and a project is now being prepared for carrying off surface water from the whole area lying between the canal and the Káron Nadi from Jarcha downwards, past Khúrja, to enter the Nadi again at the village of Johara. In order to enable the Karwan to carry the increased volume of water that will be thrown into it by this scheme without risk of damage to other lands its bed will need improvement, but immediate relief must be afforded to Khúrja." The evils caused by the over-saturation of the soil have thus, at length, been recognized, and projects involving an expenditure of nearly twenty lakhs of rupees have been sanctioned, of which one-half will probably be completed during the year 1875-76. The works in this district alone will cost some Rs. 4,03,825.

The principal towns situated upon the Káli are, on the right bank, Bulandshahr and Pahásu, and on the left Múlágarh and Chaundera. Looking at the river in connection with communications, I note that in times of flood it is about 1,600 feet broad and about four feet in average depth, but just about the middle it is not less than twenty feet in depth. During the cold weather it is about thirty feet broad and about five feet deep in the deepest part. The banks are well defined, but slope down gently to the bed. The bottom is hard and firm. It is not fordable anywhere in this district during the rains. It is crossed on the metalled road from Bulandshahr to Anúpshahr by a masonry bridge, on the metalled road from Anúpshahr to Aligarh by a masonry bridge, and on the Khúrja and Shikárpur road by a wooden bridge in the cold weather and by a ferry in the rains.

Hindan.

The river Hindan enters this district from Meerut in the north of parganah Dádri, and after a winding and irregular course of some nineteen or twenty miles joins the Jumna in the area of village Mangrauli towards the north of parganah Dankaur. The Hindan flows between high shelving banks, and has no separate valley or trough of its own, but winds very much and is constantly changing its channel. For these reasons the river is not used as a boundary between the villages situated near it. It is rather the rule than the exception that the village areas in immediate proximity to the Hindan are situated on either side of it. Irrigation is carried on extensively from the Hindan, the water being raised chiefly by *láos* as in well irrigation, *i. e.*, by means of a wheel and uprights placed close to the edge of the bank, and by lowering the leathern bucket *(charas)* by means

of a rope over the wheel into the stream itself. The land of the villages which border on the Hindan are the best in the parganah of Dádri owing to its constant renovation by rich alluvial deposits, but it sometimes suffers from high and violent floods to which the river is very liable. In the year 1842, after excessively heavy rains and consequent flooding of the river, silt was found deposited upon portions of the adjacent lands to the depth of over 25 feet. The Hindan is not regarded as navigable, and the water is sometimes so low in the hot season that no boat could pass over it. The surface velocity of the river in the rainy season taken near Ghaziabad is eleven feet per second. The only town of any importance situated upon its banks in this district is Kásna on the left bank.

Other streams.

Besides the rivers already mentioned there are two or three streams in this district which, though merely natural drainage lines, deserve a passing notice. The most important of these is the Káron or Karwan, which rises near Parpa to the east of the Ganges Canal and flows in a southerly direction; it increases in departure from the East Káli Nadi as it advances in its course, and in its natural features resembles the Chhoiya. It is always fordable in the rains. It is crossed on the Jewar and Khúrja second-class road, by means of a causeway which is covered to the depth of two or three feet in the rains. The banks are not well defined, but the bottom is level and firm. The width during the rains is about 250 feet, and the depth about five feet. It is perfectly dry in the cold-weather. It runs east of Sikandarabad, and on into parganah Khúrja and the Aligarh district, and finally, after a course of ninety miles, falls into the Jumna at a point near the village of Sháhdera, just below Agra.

The Patwai or Patwaliya rises in some lowland which lies to the west of the town of Járcha, and running through parganahs Dankaur and Jewar on into parganah Tappal of the Aligarh district, finds its way into the Jumna at Nausherpur, in the Muttra district. For the first 35 miles of its course no regular river-bed is formed, and cultivation is carried on in the slight depressions which are occupied by water during the rains. Close to the village of Rautera, however, it is joined by another line of drainage collected in the *dhák* jungle lying between Dankaur and Rabupura, and thereafter it increases in width until it joins the Jumna. The Chhoiya rises at a point about 3½ miles to the east of the canal in the latitude of Meerut; it takes a southerly direction nearly parallel to that of the canal, and falls into the East Káli Nadi nine miles below Hápur, just within the Bulandshahr district.

Ferries.

There are ferries on the Ganges at Anúpshahr, Bahriya, Dípput, Jasúpur, Jhabda, Karanbás, Narora, Rámghat, Rájghat, Ahár, Mándu, Farída, and Basi. On the Káli there are second class ferries at Anchru and Pahásu, and one on the Hindan at Bhangel.

The revenue from these ferries in 1858 amounted to Rs. 8,665 ; in 1861 to Rs. 15,135 ; in 1865 to Rs. 22,268 ; and in 1871-72 to Rs. 21,432. At Anúpshahr and Rámghat a bridge-of-boats is kept up during the dry season. As a rule the ferries are leased to contractors, but not for more than one season at a time. The revenue of 1858 is only for the first six months of the year.

There are no fords in the rains on either the Ganges or Jumna. The rule for settling disputes between riparian proprietors on the Ganges and Jumna is that the deep stream shall be regarded as the boundary of the several estates. If the river changes its course and cuts off so much land from one village, there is an equivalent gain to the inhabitants of the village on the opposite side, which may in its turn lose as much, and even more, should the river return to its original course.

Lakes, &c.

There are no important lakes or jhíls in this district, but there is one tolerably large irregularly shaped *jhíl* at Ahmadgarh, in the north of parganah Pahásu. It is chiefly remarkable for producing large crops of *singhára*, or water caltrop, a species of nut, and thereby bringing in a fair yearly revenue to the zamíndárs, who let the lake out to Kahárs and other low castes. There is another *jhíl* at Kuchchesar, in the north of parganah Sayána.

Canals.

The Ganges Canal enters this district from Meerut at the village of Járcha, in the 115th mile of its course. After reaching that village, it again enters the Meerut district and flows through it for one or two miles, re-entering this district near the village of Gesupur in its 119th mile. From this point it runs south-west through parganahs Dádri, Sikandarabad, Khúrja, Bulandshahr, and Pahásu, leaving the district at its 155th mile near the village of Kasúmbhi. The total length of the main channel in this district is 38 miles.

Principal works on the canal.

At or near the 110th mile, close to the village of Dahara in parganah Dásna of the Meerut district, the Bulandshahr branch, excavated as a famine-relief work in 1860, leaves the main canal on the right bank. The head-works consist "of a bridge with eight bays of 20 feet each over the main canal, and a bridge with a centrical bay of 20 feet, and two side bays of 15 feet in width each, over the head of the branch, connected by a line of curved revetment, resting upon a redan-shaped platform, which projects its acute angle towards the point of separation of the main stream and the branch ; the sides of this redan consist of flights of steps, or ghâts, which are approached from the higher levels by stairs centrically placed on the curved revetment; both these bridges are fitted with shutters and planks and the necessary appliances for regulating the water." At Kot, on the Grand Trunk Road, four miles east of Sikandarabad, this branch divides into two, known as the right and left branches, both of

which run, with a slight course to the east, southwards into the Aligarh district, and through the Duáb between the Patwaliya and the Káron. From its entry into this district to Khúrja, the line of main canal, after crossing the lowland in which the heads of the Káron are situated, runs between that river and the East Káli Nadi. At their widest points of separation they are only 7½ miles apart, whilst immediately opposite the town of Bulandshahr the width does not exceed 4½ miles. In the early part of its course the direction of the canal is a prolongation of the straight line from Dahara, but at the 127th and 131st miles there are curves towards the west, and at the 139th mile a curve towards the east, all of which are designed to enable the canal to follow the general direction of the high land and the water-shed, as well as to open country unconnected with sites of houses or villages. The slope from north to south is about 1·42 feet per mile, and transversely the slope falls from the Káli on the east to the Káron on the west. The soil in the excavation is tolerably good except where sand occurs, but the soil below the canal bed is light and not very good. Taking the latitudes of Bulandshahr and Khúrja, Colonel Cautley found that at the former place the bed of the canal was 22·33 feet above the bed of the Káli on the left, and 6 feet above the bed of the Káron on the right; and at Khúrja, 11 miles lower down, the Káli was 24·83 feet, and the Káron 10·5 feet lower than the canal line.

From Khúrja southwards the canal maintains the same relative position. At Múnda Khera, on the 143rd mile, there is an escape with a waterway equal to sixty feet in ten sluices of six feet each, and connected with the East Káli Nadi. At the 149th mile the Palra falls deliver the whole body of the canal water on a level five feet lower than that on which it has been running. This work consists of five bays of 20 feet each, giving a clear waterway of 100 feet; the general design of the work being the same as that which is, hereafter, described under the Muzaffarnagar district. Three miles below the Palra falls the Koil branch leaves the main canal on the right, close to the 152nd milestone. The works are similar to those at the head of the Bulandshahr branch, with the exception that the regulating bridge over the canal has a waterway of only 120 feet, divided into six openings of 20 feet each.

The following works have been constructed on the main line in this district:— Rájbahas and inlet heads at Sanauta, Arauli, Walipura, and Múnda Khera; bridges at the same places and at Gesupur, Phakana, Dhanora, Máman, Acheja, Sahenda, Játaula, and Kasúmbhi. There are canal *chaukis* or stations at each of these places. Others are the escape works at Múnda Khera; at Palra, falls, mills, and a head to the navigable channel and locks and the Koil branch head-works. On the extreme east flows the Fatehgarh branch of the canal completed about 1860, but which now, owing to a failure in the supply from the main canal, stops short at Anúpshahr. It waters the north-eastern portions of

the district by the Parichhatgarh and Kithor rájbahas and the Bahádurgarh and Waira branch distributaries. The entire line of the main canal is navigable throughout this district, but there is little navigation, and the water-power is only made use of at Palra. There are some 626 miles of distributaries attached to the canal in this district. There are no large river communities though Anúpshahr is to some extent supported by timber traffic, and Rámghát by fees from pilgrims coming to bathe. There are about 200 families of fishermen, 200 boatmen and 200 men employed in dragging boats, or altogether 2,500 souls supported by river industries.

Communications.

The following railway stations are on the East Indian Railway :—Dádri, 21 miles from Bulandshahr; Sikandarábad, 14 miles; Chola, 10 miles ; and Khúrja, 13 miles. On the Oudh and Rohilkhand Railway from Aligarh to Moradabad, Dibái is 29 miles, and Rájghat 32 miles from the civil station.

Roads.

The principal lines of road throughout the district are the Grand Trunk Road, 38 miles, and its branch to Dehli, 37 ; Sikandarabad to Anúpshahr, 35 miles ; Sikandarabad to Biláspur, 6 miles ; Bulandshahr to Máman, 5 miles; Jhájar to Bulandshahr, 15 miles, and Anúpshahr to Aligarh, 22 miles. All the above roads are metalled throughout. The following are the principal raised earthen roads:—Jewar to Khúrja, 21 miles : Bulandshahr to Rámghat, 41 miles ; Bulandshahr to Sayána, 21 miles; Jewar to Dehli *viâ* Rabupura and Dankaur, 35 miles. This district is particularly well supplied with both water and land carriage. The Jumna and Ganges pass on either side of it, and the canal runs down the middle. The Grand Trunk Road divides at Khúrja, one branch going to Dehli and the other to Meerut. These two branches are connected in two places by the metalled road from Bulandshahr to the Chola or Bulandshahr road railway station and on to Jhájar, and by the Anúpshahr and Sikandarabad road, which passes through Bulandshahr across the Grand Trunk Road to Meerut, and joins the same road to Dehli at Sikandarabad. Since the railway has been opened to Dehli, the most important road, in a mercantile point of view, in the district is that from Anúpshahr to Sikandarabad, joining the Grand Trunk Road at the latter place. A very considerable traffic from Chandausi and from Rohilkhand, generally in *gúr*, sugar, *joár*, and *bájra*, passes across by Anúpshahr, and up along the Sikandarabad and Anúpshahr road into the Grand Trunk Road, and so on to the trans-Jumna provinces. There is also a considerable return traffic in salt.

The only town of more than local importance in the district is Khúrja. The rail passes within 3½ miles of the town, from which a metalled road leads to the railway station, and the Grand Trunk Road, as already stated, bifurcates at Khúrja, one branch going to Dehli and the other to Meerut, so that the town is

particularly happily situated in regard to communications. It is generally supposed that the Oudh and Rohilkhand Railway will absorb a considerable quantity of the traffic which at present passes by road *viâ* Sikandarabad and Dehli to the Panjáb, and back from thence to the trans-Gangetic districts. The roads, with the exception of the Grand Trunk Road, have in this district been in charge of the Local Funds Committee since 1863. Several important works were completed in this period: saráis for native travellers were built at the railway stations of Khúrja, Kharli (Sikandarabad), and Chola. At the latter place there is a strikingly handsome building, the lower story of which is set apart for the use of natives, and the upper story for Europeans and natives of higher rank. The following roads were also constructed:—Bulandshahr to Máman, Bulandshahr to Tájpur, a feeder to the Grand Trunk Road to Meerut, and feeder roads to the railway stations. The roads from Bulandshahr to Shikárpur, Anúpshahr, and Sayána were raised and straightened. There are no new roads required, and the communications with other districts are now amply sufficient for all purposes.

Meteorology.

The climate of Bulandshahr varies very much. It is extremely cold in the winter months, when the thermometer frequently falls to or near freezing point. During the prevalence of the hot winds in the latter part of spring and beginning of summer the climate is dry, but when the rains set in it is moist in the extreme. No meteorological observations are made for this district. The average rainfall for the whole district for the year ending 1st of June, 1872, was 32 inches.

The average total rainfall for the ten years 1860-61 to 1870-71 is given below:—

Period.	1862-63.	1863-64.	1864-65.	1865-66.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.
1st June to 30th September, ...	27·8	22·6	13·2	16 3	21·6	26·9	11·0	13·9	29·2
1st October to 30th January,	1·4	·5	...	1·2	1·3	3·4	1·1	5·6	0·4
1st February to 30th May, ...	...	1·4	4·6	·7	2·4	2·2	1·8	2·0	2·4
Total ...	29·2	24·5	17 8	18·2	25·3	32·5	13·9	21·5	32·0

Rainfall.

The following table gives the total rainfall at some of the principal stations of the district for the years 1844-45 to 1849-50 from returns existing among the records of the Board of Revenue.

Name of stations.	1844-45.	1845-46.	1846-47.	1847-48.	1848-49.	1849-50.	Average.
Baran	33·65	32·77	49·	28 46	12·40	25 51	29·30
Sikandarabad	24·53	29·50	28 37	31·86	15·30	51·03	30·10
Aurangabad	34·69	33·66	31·65	31·78	...	...	34·50
Khúrja	53·07	50·55	41 41	49 28	...	23·54	37·45
Dibái	30 97	29·02	27·09	38 10	23·71	30 74	29·94

Part II.

Productions of the District.

Animal kingdom.

The principal wild animals of the district are the *magar* and the *ghariyál*, species of alligator found in the Ganges and Jumna, the former with the local name of *náká* when a man-eater; *nilgai* or *auja (Portax pictus)*; antelope; wild pig; wolf *(bheriya)*; porcupine *(sihí)*; otter; jackal and hyena *(guftár)*. Snakes of all kinds abound. The deaths in 1871 from snakes and wild beasts were 27. Rewards are given for their destruction: for a hyena or female wolf three rupees; for a male wolf two rupees; for a female cub twelve annas; for a male eight annas. There are some few Aheriyas in the district who obtain a livelihood by trapping birds and game. Two or three, perhaps, possess licenses for a gun, and they make something by shooting antelope, water fowl, &c., and selling them to the villagers.

Domestic cattle.

The bullocks used for agricultural purposes are of ordinary size. No improvement whatever has as yet appeared in the local breed, although an attempt to this end was made by the Collector of the District in 1868. He also proposed to import a number of bulls from Hariána, but the plan did not seem to take with the zamíndárs, who seemed as a body adverse to innovations. The proposal has not been since renewed, but the more intelligent native gentlemen seem to think that it would be a great boon to the district were Hariána bulls stationed in different parts of the country at the Government expense, in the same way as the stallions from the Government studs; at the same time, however, they do not seem inclined to defray any portion of the expense themselves. The cost of a pair of ordinary bullocks is from Rs. 25 to 50. Two sorts are generally in use for superior labour in this district. The first is the Mewat breed, which is chiefly used and admirably adapted for agricultural purposes; the second, the Nagor breed, chiefly used for carriage. The cost of a pair of Mewat bullocks varies from Rs. 80 to 150, while the price of the Nagor breed runs from Rs. 150 to 200 a pair. The cost of feed of a pair of Mewat bullocks is about Rs. 10 a month,

and of Nagor bullocks Rs. 20. The cows and buffaloes in the district are of the ordinary size, and very few are imported. The price of common country buffaloes varies from Rs. 50 to 70; those of the Hariána breed fetch from Rs. 60 to 100 each. A common country cow costs from Rs. 15 to 30.

Hariána bred cows fetch Rs. 40 to 80. There are no pasture lands in the district exceeding one square mile, which fact may account for the little attention paid to local breeding. A few Gújars earn a livelihood by pasturing cattle in the valleys of the greater rivers. During 1870-71 cattle disease of a virulent type raged throughout the district. The foot-and-mouth disease known as "*khar pakka aur munh pakka*," and the rinderpest, called "*bedan*," were both common. The spread of the disease was at first gradual, and appears to have been accompanied by general langour, refusal of food, ulceration of the mouth, throat and intestines; offensive breath and bloody evacuations were also exhibited. The disease was decidedly found to be infectious: from January to August, 1870, 5,934 head of cattle were attacked, of which 3,336 recovered, 769 died, and 1,529 were still ill when the report was made. The disease continued its ravages on into 1872.

Horses.

A great improvement has taken place in the breed of horses since stallions from the Government Stud at Bábugarh, in parganah Hápur of the Meerut district, have been quartered at various places in this district. The zamíndárs almost without exception take advantage of them, and the result is that strong and handsome colts and fillies are now commonly seen throughout the district. The owners are obliged to sell the young horses to the Stud Department, and the price obtained for a colt or filly of two years old varies from Rs. 150 to 200. The feed of horses is not very costly, as most landholders have a considerable area sown with lucerne grass *(rizka)* and oats for fodder. There are various modes of feeding, but English oats and good grass are most generally given. Besides these a large strong horse is seldom allowed less than three sers of gram or four sers of *moth* per diem. Sometimes a mash prepared by boiling *moth* and mixing it with *gúr* or sugar and *ghi (mutiela)* is given for the same purpose as a condition ball, but the practice is not common. The ordinary cost of feed of a horse amounts on an average to Rs. 10 a month.

The breed of sheep, camels, and goats is not worthy of notice, and no attempts at improvement have been made. These animals are generally of the ordinary size. The price of a good strong camel varies from Rs. 50 to 100; of sheep and goats from half a rupee to Rs. 2. Camels, sheep, and goats graze on trees, or in the jungle and along the roadside, and cost their owners but little for food.

Fish.

The following is a list of the fish generally caught in this district for food. The majority of the names appear to be merely local and peculiar to this district :—The *ruhel*, *shermáhi*,

mahásir, *purimáhi*, *bolár*, *panaya*, *solar*, *lanchor*, and *ghopar* are found in the Ganges and Jumna, and the *sauliya*, *rohu*, *singhára*, *lánchi* or *boáli*, *badhua*, *bám*, *patra*, *tangan*, *katerna*, *kheral*, *nareni*, *bakra*, *bachuwa*, *bhansúra* or *bekrúra*, *jhínga*, *anwári*, *ghúr*, *chaluwa*, *moh*, and *mondal* in the Káli and the Hindan. The smaller kinds of fish are found indiscriminately in all the rivers, but are caught most generally in the Hindan and Káli Nadi, which are more easily netted than the larger rivers. The modes of catching fish in use are by means of the *radherajál* or drag-net of small meshes; the *bhamarjál* or small net with larger meshes; the *tápa* or funnel-shaped basket; the dam *(band)*; and the fishing-rod *(bánsi)*. The first and fourth methods are rather destructive to the fry. There are not more than twelve or fifteen families in the district who follow fishing as a distinctive calling, but there are about two thousand Káhars, Malláhs, and Aheriyas who, though ordinarily pursuing other occupations, occasionally catch fish for sale. Gangs of fishermen come twice in the year from Rohilkhand and encamp for periods varying from four to fourteen days upon the banks of those fish-producing rivers in which nets can easily be used. These gangs number from ten to twenty persons, and their favourite river in this district is the Hindan. Whatever fish they capture they sell to the fish-eating population of the neighbourhood. There is no such thing as a fish-market in the district, nor is there even a fisherman's shop in any of the bazars. Occasionally the fishermen bring a basket or two of fish to a town, but instead of sitting in the bazar to dispose of them, they hawk them from house to house. The demand for fish is not great, and the price is consequently low. Small fish cost about one anna a seer: the larger sort about one anna and a half. No class of the population depends upon fish for its food, and except a few Bengali, Káyath, and Kahár families who have lately taken up their abode here from the lower districts, no class use fish as the principal relish with other food. The total quantity of fish consumed in this district every year does not exceed 2,000 maunds. Bulandshahr itself, which contains a population of nearly fifteen thousand souls (including more than the average number of Muhammadans and Christians), and situated on the bank of a fish-producing river, only boasts one regular fisherman. The case of the other towns in the district is very much the same. The towns bordering on the Ganges are principally inhabited by Hindús of the classes who do not eat fish and none of them possess a very large population.

Agriculture.

The cultivated area during the last twenty-five years has increased by nearly one hundred thousand acres, and seems likely still to advance as there is a considerable margin of culturable land still remaining waste. The statistics of the total area in 1870-71 were as follows:—

Pargannah.	Area in acres.						
	Cultivated.			Culturable.	Barren.	Revenue-free.	Total.
	Total.	Irrigated.	Unirrigated.				
Agauta...	45,313	31,608	13,705	9,936	6,544	2,453	64,246
Baran	58,123	27,964	30,159	12,551	16,111	2,782	89,567
Shikárpur	35,899	13,170	22,729	14,231	9,729	1,851	61,710
Sayána	59,062	19,058	40,004	19,494	7,206	4,060	89,822
Tahsíl Total ...	198,397	91,800	106,597	56,212	39,590	11,146	305,345
Ahár	58,708	15,744	42,964	23,168	10,031	11	91,918
Anúpshahr	53,717	21,867	31,850	13,574	9,435	432	77,158
Dibái	78,892	30,961	47,931	15,736	19,223	1,565	1,15,416
Tahsíl Total ...	191,317	68,572	122,745	52,478	38,689	2,008	284,492
Khúrja	81,112	38,625	42,487	32,010	9,898	156	123,176
Pahásu	54,466	23,557	30,909	21,785	5,095	21	81,367
Jewar	56,929	16,135	40,794	24,552	7,686	147	89,314
Tahsíl Total ...	192,507	78,317	114,190	78,347	22,679	324	293,857
Sikandarabad	61,079	28,257	32,822	16,256	14,034	9,590	100,959
Dankaur	47,296	16,553	30,743	23,508	8,851	17,119	96,774
Dádri	88,796	37,949	50,847	34,094	14,087	1,517	138,494
Tahsíl Total ...	197,171	82,759	114,412	73,858	36,972	28,226	336,227
Grand Total ...	779,392	321,448	457,944	260,895	137,930	41,704	1,219,921

Further inquiries at the close of 1871 made the cultivated area amount to 851,366 acres, of which 424,636 acres were under rain crops and 426,730 acres were under spring crops. The culturable area during the same year consisted of culturable waste, 200,254 acres, revenue-free lands, 39,975 acres, and fallow of one year, 6,640 acres; total 246,869 acres.

Irrigation.

Irrigation is carried on from wells, tanks, and canals to a very great extent in this district. Taking the returns for 1871 alone, the irrigation in acres in both seasons has been as follows:—

	Canals.	Other sources.	Total.
Rabi	79,726	137,676	217,402
Kharif, ...	42,242	28,605	70,847
	121,968	166,281	288,249

Deducting from this total the area cropped in both seasons, or 69,561 acres, the balance of 218,688 acres shows the net area irrigated in 1871, and 632,678 acres of the cultivated area were left dry. Out of the total area irrigated, according to the returns of 1865, 268,868 acres were irrigated from wells, 36,754 acres from the canal, and 14,804 acres from ponds, tanks, and rivers. Since

then the canal-irrigated area, as shown above, has considerably increased, superseding irrigation from wells, which in many cases, owing to the rise in the water level, are now of no use. In addition to this, canal-irrigation costs only Rs. 6 an acre, while well-irrigation costs Rs. 10 per acre.

The depth of water from the surface, in the high tracts of inferior land along the banks of the Ganges and the Jumna, varies from 24 to 30 feet, while in Jewar it is 40 feet. In the body of the district generally, the water-level naturally rests at from 18 to 24 feet from the surface, but in the tracts affected by the canal this has been raised to 10 or 12 feet, so that, as already observed, hundreds of *kuchcha* temporary wells have been destroyed there, and no new ones can be sunk. To counterbalance this loss, land which formerly only produced one crop now bears two, and has consequently become more valuable, and the cultivators, assured of water in seasons of drought, have become more independent and painstaking. The increase of land-revenue accruing from canal-irrigation, after allowing for the deterioration of lands lying in the valley of the Káli Nadi, amounts to near Rs. 33,418 a year in this district. The projected increase of canals will no doubt entirely supply the wants of the district in this respect and eliminate to a great extent the element of chance from agricultural speculations. Any increase in the proportion of canal-irrigation to well-irrigation has a tendency to displace the use of temporary wells, and is not peculiar to this district.

Average irrigation from wells.

The following statement shows the number of masonry and temporary wells in each parganah, with the number of *láos* or leathern buckets worked by them, the average area watered by each *láo* and the average depth of the water in the wells and the depth of water from the surface. The average area irrigated per *láo* through the whole district is 8¾ acres, or 14 pukka bíghas :—

Parganah.	*Masonry wells.*		*Temporary wells.*		*Total.*		Average area watered per láo in acres.	Average depth of water from surface.	Average depth of water in wells.
	Wells.	Láos.	Wells.	Láos.	Wells.	Láos.			
								Feet.	Feet.
Anúpshahr ...	505	1,132	1,131	1,730	1,636	2,862	7·5	27·0	5·0
Ahár ...	438	982	491	703	929	1,685	8·7	18·7	6·7
Dibái ...	759	1,611	1,951	2,369	2,710	3,980	7·2	24·8	8·1
Khúrja ...	1,016	2,471	491	662	1,507	3,133	10·0	19 0	11·0
Pahásu ...	598	1,395	333	416	931	1,811	8·0	18·0	10·0
Jewar ...	418	897	900	1,040	1,318	1,937	8·0	28·0	9·0
Dankaur ...	360	727	888	107	1,248	834	8·0	20·7	10·7
Dádri ...	893	1,820	791	942	1,684	2,762	9·5	20·7	8·9
Sikandarabad ...	661	1,237	1,249	1,395	1,910	2,632	8·7	22·0	9·8
Agauta ...	312	571	2,018	2,406	2,330	2,977	9·5	24·5	10·5
Baran ...	442	1,001	1,304	1,675	1,746	2,676	8·0	20·0	9·3
Shikárpur ...	418	846	266	363	684	1,209	9 5	19·3	10·5
Sayána ...	466	812	725	791	1,191	1,603	11·0	18·3	8·4
Total ...	7,286	15,502	12,538	14,599	19,624	30,103	8·7	20·0	8·0

The great increase in fevers during the last few years has kept pace with the increased activity in the canals and more extended irrigation, and so far the canals have had a prejudical effect upon the public health in this district. There has been little efflorescence of *reh* due to the canal, and with the exception of flooding in the escapes, the action of the canal in regard to the land itself has been on the whole beneficial. The area irrigated varies from year to year according to the season; increasing, as may be supposed, in seasons of drought and decreasing in years of excessive or ordinary moisture. The following statement shows the canal-irrigation per parganah for a series of years compiled from the records of the Canal Department:—

Year.	Dádri.	Agauta.	Baran.	Sikandarabad.	Pahásu.	Khúrja.	Dibái.	Sayána.	Ahár.	Dankaur.	Jewar.	Atúpshahr.	Total.
1866-67.													
Kharif...	778	2,063	3,819	992	3,436	4,852	...	1,315	1,368	...	...	...	18,623
Rabi ...	1,332	5,652	5,897	2,747	7,434	5,809	58	3,237	1,904	...	...	...	34,070
Total...	2,110	7,715	9,716	3,739	10,870	10,761	58	4,552	3,272	...	...	...	52,693
1867- 8.													
Kharif ..	3,252	1,637	2,425	2,859	2,864	3,109	...	1,078	2,032	2,758	131	...	22,145
Rabi ...	6,489	5,036	4,279	5,065	7,205	5,201	57	2,010	2,129	4,270	632	...	42,373
Total...	9,741	6,673	6,704	7,924	10,069	8,310	57	3,088	4,161	7,028	763	...	64,518
1868-69.													
Kharif...	6,691	4,832	4,565	6,188	6,812	6,070	...	2,457	2,160	5,399	1,254	16	46,544
Rabi ...	18,830	6,836	9,075	21,493	11,480	18,455	...	5,899	3,951	12,074	5,173	...	113,266
Total...	25,521	11,668	13,640	27,681	17,292	24,525	...	8,356	6,111	17,473	6,527	16	159,810
1869-70.													
Kharif...	11,032	5,168	6,464	7,831	7,975	10,491	...	3,079	3,159	7,039	2,150	...	64,388
Rabi ...	11,992	7,579	7,009	8,602	7,322	11,313	...	4,186	3,449	6,609	149	275	68,985
Total...	23,024	12,747	13,473	16,433	15,797	21,804	...	7,265	6,608	13,648	2,299	275	133,373
1870-71.													
Kharif...	6,382	2,900	4,504	4,717	5,239	7,971	...	2,008	1,932	4,515	2,239	119	42,526
Rabi ...	13,463	7,209	7,506	9,190	9,077	10,108	...	5,472	4,575	8,692	4,328	634	80,254
Total...	19,845	10,109	12,010	13,907	14,316	18,079	...	7,480	6,507	13,207	6,567	753	122,780
1871-72.													
Kharif...	4,937	3,033	3,454	3,457	5,780	5,524	...	1,584	1,718	3,926	1,930	270	35,613
Rabi ...	9,702	6,161	5,510	6,666	8,215	5,369	...	4,589	3,730	6,930	2,048	284	59,204
Total...	14,639	9,194	8,964	10,123	13,995	10,893	...	6,173	5,448	10,856	3,978	554	94,817
1872-73.													
Kharif...	4,485	3,426	4,697	4,313	5,848	6,618	...	1,891	1,692	4,796	1,829	163	39,758
Rabi ...	10,695	6,507	7,060	7,921	8,304	7,525	...	4,091	2,986	7,943	3,168	145	66,345
Total...	15,180	9,933	11,757	12,234	14,152	14,143	...	5,982	4,678	12,739	4,997	308	106,103

Influence on crops.

Taking the principal products grown in the district, the following statement shows the acreage of each crop irrigated by canals for seven years, and thus the influence of the canal in promoting the production of the more valuable crops :—

Crops.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.
Gardens	391	188	343	1,837	1,488	1,181	1,365
Sugarcane	747	1,027	10,732	4,317	3,378	2,343	2,951
Wheat	3,757	14,014	51,378	40,066	53,388	44,042	41,239
Barley	1,862	473	23,285	17,634	15,164	8,963	14,717
Rice	76	103	3,275	372	197	302	114
Maize	...	...	...	7,085	1,179	276	116
Other cereals	1,843	789	9,982	5,429	6,844	366	523
Gram	3,761	91	974	7,012	2,959	1,966	6,144
Other pulses	332	941	246	3,246	710	3,418	2,164
Fodder	...	...	...	1,815	1,399	522	1,197
Cotton	2,880	1,731	5,987	13,015	7,639	5,635	3,005
Other fibres	...	...	...	90	475	211	336
Indigo	6,149	5,261	5,558	31,196	24,865	25,003	31,905
Other dyes	...	...	...	334	1,332	258	143
Drugs	...	...	...	26	47	54	110
Oil-seeds	...	...	...	...	31	77	4

Character of existing waste lands.

The culturable waste is considerable, but as a rule, except in a few places, it is much cut up by barren patches that are entirely unculturable. In the eastern part of parganah Agauta there is a long strip of culturable waste interspersed with patches of *dhák* jungle and low marsh lands known as *dukars*, which stretches on into parganah Baran with the same character. In Shikárpur, about Chaukla, there are large barren tracts of a similar kind drained by the Chhoiya Nála. In parganah Sayána there are extensive tracts of culturable land now covered with *dhák* jungle and used for pasturing cattle. In the cluster of villages between Ahár and Garrauli in parganah Ahár there are large stretches of culturable waste interspersed with patches of land completely barren. The Khúrja parganah contains large tracts extending for several miles of utterly barren waste and scrubby forests of *dhák* jungle mingled with unculturable patches of *shor* and *kalar* lands. The *khádir* lands of the Jumna, though containing considerable tracts of culturable waste, are so subject to inundation, and the climate is so unhealthy, as to give little prospects of profitable investment in agriculture.

Staple products.

Wheat, barley, and gram are the staple products of the *rabi* harvest, and the common millets and pulses of the *kharif* harvest. Sugarcane and rice are but little grown, but indigo, safflower, cotton, and tobacco are more or less cultivated all over the district. The poppy cultivation, too, is spreading a little. The *rabi* crops in general are wheat, barley, gram, tobacco, peas, masúr, onions, garlic, *dúa*, *tára*, and safflower :

in the *khárif*, *joár*, *bájra*, Indian-corn, *múng*, *urd*, *arhar*, red pepper, *til*, indigo, cotton, *kangni*, *sáwank*, *mandua*, *lobiya*, *kodo*, *chauláí*, *siághára*, *alsi*, *chari*, and various vegetables.

Urd, safflower, and oil-seeds.

Urd, safflower, and oil-seeds may be mentioned amongst the specially cultivated products of the district. The cost of cultivation of *urd* averages five to seven rupees per bígha, which is the pukka bígha of 3,025 square yards, or about five-eighths of an acre, and the outturn is from 5 to 7½ standard maunds per pukka bígha, averaging, say, 6¼ maunds. The price will be found under "Prices." *Urd* is sown in Asárh (June-July) and reaped in Aghan (October-November), very often in *dákra* and *seota* soils, and requires no irrigation except in seasons of deficient rainfall. The *bhúsa* or chaff sells at four maunds for the rupee, and the grain is sometimes exported. Safflower *(kusúm)* is sown in Kuár and picked in Phálgan, and an oil is extracted from the seed *(kur)*. The chaff is sold as fodder for cattle. In the Baran táhsíl the oil-cake is usually given as wages for extracting the oil. The seed is not gathered till the close of Phálgan. A maund of seed yields seven sers of oil, 14 sers of oil-cake, and 19 sers of chaff in the Khúrja táhsíl. Irrigation is needed where carrots and safflower, as often happens, are sown together, otherwise the *mahawut* or winter rains are sufficient. The cost of production is about eight to nine rupees per pukka bígha. The outturn of flower is about 8 to 18 sers per bígha, with an average of 13 sers. The flower sells at 2 to 2½ sers per rupee. The produce of seed is about 64 to 144 sers per bígha. The average price of the seed is one rupee per maund, and of the oil is four or five sers per rupee. Taking 100 sers as the average yield of seed, the profit would appear to be only about one or two rupees per bígha. The following table shows the cost of manufacturing oil from various seeds compiled from the average of the vernacular returns of each tahsíl:—

	Value of oil-seed per rupee in sers.	Oil extracted in sers.	Oil-cake refuse in sers.	Cost of extracting in annas.	Value of oil per rupee in sers.	Value of oil-cake per rupee.
Duán	13	10·	30·	12·	4·	35·
Sarson	12	13	27·	12·	3¾·	35·
Til	8	16·	24·	12·	3¼·	40·
Safflower ...	40	7·	14·	12·	4¼·	36·

In the year 1870-71, a year of average plenty, the area under each crop and the average produce was—

	Rice.	Cotton (uncleaned).	Joár and bájra.	Oil-seeds.	Wheat and barley.	Pulses.
Area in acres ...	1,415	59,871	2,37,355	(In other crops)	325,272	28,623
Produce in maunds	8,304	248,339	884,767	1,84,015	2,409,907	4,01,442

The average cultivation of a plough is about fourteen bighas pukka, or 8¾ acres, and is thus shown with the outturn and value of each crop for parganah Khúrja. The average price gives that of the harvests for ten years before the famine year in 1861 :—

Irrigated except bárah land.

Crop.	Land sown per plough.	Average produce per bigha.	Cultivator's share.	Zamíndár's share.	Average price per rupee.	Value of zamíndár's share produce per bigha.	Total rent.
	B.	M. s.	M. s.	M. s.	M. s.	Rs. a. p.	Rs. a. p.
Wheat ...	2½	5 0	2 10	2 30	1 4	2 8 0	6 4 0
Barley ...	1½	5 20	2 30	2 30	1 18	1 14 6	2 13 9
							8 8 11
Cotton, &c. ...	2½					Rent.	
							17 10 8
	6½						
		Unirrigated.					
		M s.	M. s.	M. s.	M. s.		
Barley ...	3	3 0	1 16	1 24	1 18	1 1 7	3 4 10
Gram ...	1	3 20	1 25	1 35	1 18	1 4 4	1 4 4
Joár and urd ...	1	4 30	2 9	2 21	1 10	2 0 0	2 0 0
Bájra and moth ...	1	4 30	2 9	2 21	1 14	1 13 11	1 13 11
Ditto ...	1	3 20	1 25	1 34	1 16	1 3 2	1 5 2
Zabti	½				...	Rent.	1 5 0
							11 1 3

This gives a rate per acre of Rs. 4, 5, 7 for irrigated and Rs. 2-5 for unirrigated land. The subject of rents is further noticed hereafter.

Mode of husbandry.

The mode of cultivation does not differ from that in use in other districts. Manure is made use of in the vicinity of large towns, but is not obtainable in the country, and the land is not allowed to lie fallow though there is the usual rotation of crops. The increase in the production of indigo and cotton and the increased consumption of food grains from the increase in the population is amply met by the breaking up of new lands for cultivation. The consequence is that land of inferior quality is now being brought under the plough and even lands affected with saline deposits. *Dákra* soil produces rice, wheat, gram, barley and gram, and barley and peas mixed, to the exclusion of the inferior crops. *Seota* is capable of producing all kinds of crops. *Pilotá* only yields the poorer crops, and *tára* a species of mustard seed which seems to thrive best in it. Barley too is grown in a favourable *rabi* harvest. *Bhúr* yields the rain crops and the poorer descriptions of *rabi* crops, but it is seldom irrigated owing to its locality and nature. There is, also, a kind of barren soil showing no signs of saline matter, except by its extreme hardness, and yet producing scarcely anything but grass which

has been brought into cultivation to some extent by watering it well, and then ploughing it up for two or three years and giving it a good coating of manure for the first season. A scanty crop is thus produced which improves in time. *Reh* waste has not increased except in the tracts near the canal. The remedies adopted for the curing of this land are sub-soil drainage, and in some places a deposit of silica to the depth of six inches has been found to be of much use. The silt carried down by the canal is nearly all pure silica, but owing to the system of *tor* irrigation in force these benefits cannot be reaped from the canal. The really good culturable waste in the district is not more than twenty per cent. of the cultivated area, and much of this is only fit for grazing, more particularly that in the *kkádir* of the Jumna and Ganges.

The model farm.

A model farm was established for the experimental cultivation of cotton near Bulandshahr in June, 1870; 93 acres 2 roods 35 poles were sown with cotton, and similar experiments were continued during the following year. The result of the experiments made during 1872-73 was to give the following yield per acre, fractions omitted :—

	First.	*Second.*	*Third.*	*Fourth.*	*Fifth.*	*Sixth.*
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
Hinganghát, ...	45	66	52	71	70	28
Bani	50	57	42	27	48	20
Indigenous ...	58	117	99	118	68	30

Cotton.

In the first, the land was deep ploughed, manured and irrigated, and the seed sown on the ridges; the system being the same as that known as Mr. Login's. The second was similar to the first without ridges; the third the same as the second without manure. In the fourth the land was broken up by the ordinary plough and irrigated, and the seed was sown in lines. The fifth was similar to the fourth with the addition of 85 maunds of manure per acre, and the sixth was purely on the native system. It would thus appear that the fourth plot cultivated on the native system, except that the seed was sown in lines, yielded the best produce. Similar experiments were made at the Cawnpore Model Farm, and the following note on the trials at both the farms by Mr. A. Parsons is interesting as a summary of the results. The object of the experiments at Bulandshahr and Cawnpore was to try and discover, if possible, wherein lay the secret of the success of the "Egyptian system in Mr. Login's hands (500lbs. of clean cotton to the acre), and to determine if the system was within reach of the ordinary cultivator. At the Chándi Farm, near Kalka, the Egyptian system under an energetic Superintendent yielded last season (1872-73) 197lbs. of clean cotton per acre on land manured at the rate of 50 loads to the acre—probably from 25 to 30 tons; and out of six other experiments on the same plan without manure on different qualities of land, the outturn per acre ranged from 45 to 178lbs.

Mr. Login's own trials gave him, in 1871-72, 497½lbs. per acre. During the last season he obtained 363½lbs. per acre. At Cawnpore, during 1871-72, the Egyptian system, partially carried out, yielded 56lbs. of clean cotton per acre in a bad season."

In 1872-73, however, a portion of the same land yielded 446lbs. of clean cotton per acre, manured at the rate of 30 tons to the acre. The results of the Cawnpore experiments show that the secret of the Egyptian system lies in heavy manuring, abundant but careful irrigation—in short, perfect cultivation, and this is beyond the reach of the ordinary native cultivator. Except in Mr. Login's own hands, at Chandi, and at Cawnpore, the Egyptian system has proved, in every case in which I have known it tried, a miserable failure. For the third experiment at Cawnpore no manure at all was applied for the cotton, yet the yield on one part of the field was 323lbs. and on the other 339lbs. per acre. It is true this field was well manured in September, 1871, with blood manure, superphosphate of lime, bones, and farm-yard manure, and yielded a fair crop of wheat and barley, but nothing like so much as 70 tons per acre were applied. For the cotton the land was merely ploughed twice with an English plough and once with a native one. Mr. Login's plan, as tried at Allahabad, yielded 26lbs. of clean cotton per acre more than was obtained at Bulandshahr; no irrigation was available at Allahabad, but about 12 tons more of manure were applied than at Bulandshahr.

Few natives would or can apply as much as 70 tons of manure to the acre. Neither does the land wholly cultivated by the native plough require it, but with the English plough the case is different. Without the aid of plenty of manure, excepting virgin land, deep ploughing, in every case that I can recollect, has hitherto proved invariably inferior to the native method. Without the aid of more manure than the native cultivator can commonly command, I look upon the English plough as a lamentable failure hitherto in India. Deep ploughing of itself is of no advantage whatever, but the contrary. A native maintains the surface of his land by repeatedly ploughing the unoccupied portions of it during the rainy season, and applying what little manure he can to it at all times. But beyond the three inches or so of the surface the native plough never reaches, and the soil below is consequently never improved nor fertilized. The English plough, however, turns it up, and unless this lower portion is liberally manured, you have worse soil than before, and do mischief instead of good. One of the single-bullock municipal carts that may be seen daily about either Cawnpore or Allahabad will hold about half a ton of ordinary manure; consequently 70 tons would be 140 of these cartloads placed on an acre, each about 17½ feet distant from each other in every direction. Distribute this, as it would have to be, over about 34 square yards, and thoroughly incorporate it by the English

Manuring.

plough with six or eight inches of the soil below it, and the eye wonders what has become of it. On the Cawnpore farm at the present time I believe there are several hundred tons of manure lying idle on account of the expense of carting it to the fields. To manure effectually I have found to be one of the most expensive operations in Indian farming. Yet if this amount were distributed in driblets of 85 maunds per annum, one might safely say that the land would be almost as fertile at the end of 24 years as at the beginning. A native would not require to apply such an amount to his lands, which he could only incorporate with his field to a depth of about three inches.

Many persons in India believe that it is impossible to improve its lands or increase its crops by any means. Everything that has been done during the last three or four years proves that, so far as pure native cultivation is concerned, the idea is not very absurd, but with other methods the case is different. It would be difficult to teach a native how to use his present implements better than he can himself, and he is equally able to utilize the water at his command, and the only fault one can discover with his manuring is that he takes too little care of the article before putting it on his field, and lets it lie too long above ground after he has put it there. That a very little improvement may be made in his implements is admitted, but very little is necessary with his present breed of cattle and the small amount of manure he is able to save. On the whole, Mr. Parsons thinks that the experiments at Allahabad and Bulandshahr were conducted on too large a scale. He believes the Egyptian system to be an admirable one under certain very favourable circumstances, such as a most fertile piece of land and a thorough command of water.

A native or any one else attempting the system at a distance from a canal or stream would be obliged to sink a well to every acre of ridged land, or even more than one to an acre. Without irrigation it appears that Mr. Login's own yield has fallen from 497⅜lbs. in 1871-72 to 363½lbs. in 1872-73. The outturn at Bulandshahr during 1871-72 was valued in Calcutta. The Bani and Jari varieties from Berar seed were commended, but the Hingan-ghát variety did not come up to a higher standard than fair Bengal. The experiments are still going on, and no doubt in a few years will give some valuable results of use to settle the question of the improvement of the cotton cultivation in Upper India.

Taking up the report of the model farm for the *rabi* harvest of 1872-73, it would appear then to comprise an area of about 194 acres distributed as follows:—cotton 88 acres, *kharíf* crops 24 acres, and *rabi* crops 82 acres. Ten acres were subsequently added to the *rabi* crops that had previously been under indigo. The *kharíf* crops were chiefly indigo, maize,, *joár*, and sugarcane. The *rabi* crops comprised wheat, barley, gram, peas, and oats. Of the total area under *rabi* cultivation, 57 acres 2 roods and

Rabi, 1872-73.

10 poles were ploughed once with the English plough and three times with the native plough, the remainder being ploughed in the native fashion, part of it five times, and the ten acres which had been under indigo three times. The following statement shows the average yield per acre of the different crops compared with the previous year :—A. on deep-ploughed and manured land, B. on land ploughed in the native fashion and manured, and C. on land sown with indigo and afterwards re-cultivated with wheat, barley and peas :—

		Land under cultivation.		AVERAGE YIELD PER ACRE.				*Times irrigated.*		*Quantity of manure per acre in maunds.*	
				Grain.		*Straw.*					
		1871-72.	1872-73.	1871-72.	1872-73.	1871-72.	1872-73.	1871-72.	1872-73.	1871-72.	1872-73.
		A. r. p.	A. r. p.	M. s.	M. s.	M. s.	M. s.			M. s.	M. s.
Wheat of kinds	A.	19 2 25	24 2 20	10 37	14 3	17 0	17 37	1 & 2	2 to 4	103 6	85 0
	B.	24 2 20	6 2 20	12 14	10 28	21 17	16 5	Do.	3times	103 6	85 0
	C.	...	2 3 25	...	9 27	...	11 0	...	Do.	...	...
Barley ...	A.	...	9 1 35	...	16 7	...	17 20	...	Twice	...	85 0
	B.	14 0 0	10 0 10	20 16	13 0	19 10	15 19	1 & 2	Do,	103 6	85 0
	C.	...	5 2 15	...	8 9	...	8 7	...	Do,	...	...
Peas ...	A.	1 2 35	4 0 30	20 22	15 6	31 30	17 9	Once	None	103 6	85 0
	B.	4 1 105	2 2 25	24 29	15 24	29 3	16 21	None	Once	103 6	85 0
	C.	...	1 3 0	...	8 25	...	11 35	...	Do.	...	...
Gram ...	A.	2 3 15	8 1 10	24 16	16 13	36 37	22 34	None	None	103 6	85 0
	B.	2 0 5	1 2 0	20 32	14 4½	26 2	18 12	Do.	Do.	103 6	85 0
Oats ...	A.	...	5 2 0	...	17 30	...	14 21	...	Twice	...	85 0
	B	Notgiven	...	25 18	...	38 23	...	Twice	...	103 6	...

Comparing the yield from the two classes of land A. and B., the crops sown on deep-ploughed land show better results than on the other, except in the case of peas, where the yield is slightly less ; but any comparison of the outturn must be partly vitiated by the different conditions under which the crops were cultivated during the two years, both as regards the number of times which they were irrigated, the quantity of manure which was applied, and the area under cultivation. The average outturn in 1872-73 does not generally compare favourably with the results of the previous year, and it is said that, owing to the failure of the winter rains, the harvest was an unusually light one. The amount of manure given in each case was the same, or 85 maunds (about three tons) per acre. Three experiments were made with Messrs. Crompton and Co.'s "patent animal guano" manure ; the results, as reported by the gardener, were not valuable, and do not tend to show that any great benefit, if any

at all, can be derived from the use of the manure. The expenditure for the year was Rs. 6,991 against Rs. 8,222 in 1871-72. Against this must be set off Rs. 4,210, the value of produce sold and in store, leaving a net expenditure of Rs. 2,781 debitable against the farm for the year 1872-73. The net expenditure in 1870-71 amounted to Rs. 5,524, and in 1871-72 to Rs. 7,680. The farm has been abandoned from June, 1875.

Famines and droughts.

This district, in common with the rest of the upper Duáb, has always been subject to famines arising from drought, and in many cases from war. In 1631 and 1661 A.D., during the reigns of Shahjahán and Aurangzíb, famines of widespread and long-continued influence devastated the upper Duáb. These were due to the excessive drought of those years, but the scarcity of 1739 was caused by the inroad of Nádir Shah, who laid waste all the districts near Dehli. This was succeeded by the great famine of 1783 known as the *chalísa*, and considered to rank in severity next to that of 1837-38. In 1803-04 the season and war both combined to cause such a difficulty in procuring the commonest necessaries that much of the land fell out of cultivation and large remissions of the revenue were made. The grain for the troops employed at Muttra and Bhartpur was brought by Banjáras from the eastern districts, as the Duáb had been drained of its resources by the Marhattas. The next great drought occurred in 1823-24 and led to still further remissions,[1] and was succeeded by another year of scarcity that was general all over these provinces. All the western parganahs except Sikandarabad and Tibegampur suffered severely. There was little rain in September and none in the cold weather, so that the *rabi* crops could not be sown.

Famine of 1837-38.

The great famine however was that of 1837-38—one that will ever be remembered with horror by the people. The scarcity commenced in 1837, when, about June, the district was thronged with emigrants from Hariána and Marwar. In October it was reported from the adjacent district of Gurgaon that "the people had been feeding their cattle on leaves of trees for the last two months, and now this resource is failing." An opportune fall of rain relieved this district to a certain degree, while to the south matters became worse and worse. The tracts bordering on the Jumna were the most affected, and in these relief operations were carried on. The unthrifty Gújars were the principal sufferers.

Famine of 1860-61.

The next great famine was that of 1860-61, also due to drought and the unfavourable seasons since 1858. The Bulandshahr branch canal was constructed as a relief work, and towards the end of February, 1861, gave employment daily to 2,500 able-bodied persons, and besides this relief was given during January to 11,396 weak, aged

[1] Board's Rec, 17th December, 1827, No. 35; 4th February, 1828, and 18th February, 1828.

and infirm persons. Up to July Rs. 22,000 had been expended in the daily relief of nearly 4,000 souls, and it was not till the end of 1861, and the rain had fallen, that any cessation of the distress and mortality occurred. Here again the parganahs lying along the Jumna were the principal sufferers, as well from their position, removed from all canals, as also from the character of the population.[1] The next great scarcity in which relief operations became generally necessary over these provinces was the scarcity of 1868-69. Mr. Henvey writes of this district that "though there was no district more severely visited by the drought, Bulandshahr showed no signs of famine." This was no doubt due to the great extension of irrigation since 1860. In 1859-60 the total irrigated area amounted to 175,660 acres, which rose to 320,426 acres in 1865. Of this large irrigated area, 36,754 acres were due to canals and the remainder to wells and tanks. Canal operations were then pushed on and superseded wells to such an extent that in 1868-69 irrigation from canals extended to 82,378 acres, more than equalling that from wells, very many of which failed altogether. Between the first week in August, 1868, and the first week of February, 1869, scarcely any rain fell with the exception of a few showers in September, which were insufficient to moisten the ground for ploughing. The *kharíf* crops failed, and the *rabi* crops were only grown in irrigated land.

Drought of 1868-69.

There seems to have been a large stock of grain in store, and prices never rose to the rates quoted elsewhere, though large exportations took place to the south and north. The common millets of the rain crops attained to a fictitious value, showing the total destruction of the *kharíf*. In April, 1869, *joár* was worth more than wheat, and the rates tended upwards until after the rains of 1869 had insured a plentiful harvest. The residents of the district suffered little distress, though the urban population must have been pinched, for several thousand acres were sown with carrots for food. No poorhouses were needed, and at the end of 1868, when prices were at their highest, there was no demand for employment. There seemed to have been as much difficulty in procuring labourers then as in ordinary years. The following table gives the prices ruling during the months of scarcity. As a general rule, when grain falls as low as eight sers for a rupee measures of relief should be taken in hand. These have more than once been successfully carried out in this district, and owing to the advancing canal irrigation there is no reason to fear that other than the local resources will be called on at any time to aid in averting distress.[2]

[1] For a detailed account of this famine see Colonel Baird Smith's Report. [2] The best summaries of the existing information on the famines in these provinces are Messrs. Girdlestone and Henvey's reports. The prices given are those ruling during the last week of each month, as given in Mr. Henvey's report.

Prices during the season of scarcity.

Month.		Wheat.		Barley.		Bájra.		Joár.		Common rice.		Gram.	
		Seers.	ch.	Seers.	ch.	Seers.	ch.	Seers.	ch.	Seers.	ch.	Seers.	ch.
February,	1869 ...	13	11	18	0	12	0	16	0	9	8	13	11
March	,, ...	14	14	18	8	14	4	15	4	11	8	14	10
April	,, ...	15	1	22	4	12	0	14	0	9	8	14	6
May	,, ...	15	9	21	0	...		...		9	8	14	0
June	,, ...	15	8	22	0	10	8	12	0	9	8	14	8
July	,, ...	13	1	16	2	9	2	12	9	...		12	12
August	,, ...	12	0	15	6	10	0	15	0	...		11	0
September	,, ...	12	3	16	13	10	4	15	4	...		11	3
October	,, ...	10	11	17	0	17	4	17	2	9	0	10	8
November	,, ...	10	9	16	9	17	12	21	6	...		9	13
December	,, ...	8	11	16	6	16	1	18	10	...		9	9
January,	1870 ...	9	8	15	0	19	0	21	8	...		9	0
February	,, ...	9	9	17	11	19	6	20	13	...		9	0
March	,, ...	11	0	20	0	18	6	21	9	...		14	4
Average	...	13	0	18	0	14	1	16	11	9	10	12	0

Woods.

There are no forests in the district, but isolated groves of trees of various sorts are common. Those most usually found are the mango; *jáman* (*Eugenia jambolana*); *khirni* (*Mimusops kauki*); *gúlar* (*Ficus glomerata*); date (*Phœnix sylvestris*); tamarind, (*Tamarindus Indica*); *lahsora* (*Cordia myxa*); mulberry (*Morus Indica*); *maháa* (*Bassia latifolia*); plantain, guava, *ber* (*Zizyphus jujuba*); pomegranate, limes, and oranges. The principal timber trees are the *kíkar* (*Acacia Arabica*); *shisham* (*Dalbergia Sissoo*); *nim* (*Melia azadirachta*); *pípal* (*Ficus religiosa*); *dhák* (*Butea frondosa*), and *siras* (*Albizzia lebbek*)[1]. The commonest and most useful tree is the *kíkar*; the wood is hard, tough and heavy, and is used for cylinders for wells, indigo boxes, hackery wheels, agricultural implements, and charcoal. The bark is used for tanning, and the wood was used as fuel on the railway until very recently. *Shísham* also is a highly valued timber. The *sisu* or *shísham* wood is of a dark colour, well grained and heavy, and is used for beams as well as for planks, and for furniture generally. Well-seasoned *shísham* is proof against white-ants and other insects; mango wood is very light and brittle, but it is cheap and therefore much used for general purposes, as deal is in England. The *dhák* wood is extensively used for cylinders for wells, and for little else except fuel. It burns, however, very quickly, and throws out comparatively little heat, and is not therefore good firewood, but is largely converted into charcoal. The tree affords gum, which is used in the manufacture of indigo, &c.; red dye is obtained from the flower. The country has been much denuded of trees within the last five or six years for the great demand for fuel for the railroad, and even mango groves have been sold for fuel.

[1] See, further, supplementary volume on the forest trees of these provinces.

Although this subject has, for several years, received the attention of Government, and inducements have been held out to the landholders to plant trees, yet very little has hitherto been done in the matter; and unless the Government itself takes up land in various localities and sets the example of planting trees, it is much to be feared that the timber supply in this district will soon fall very far short of demand.

Salt.

A Deputy Inspector of Customs with a large staff is employed in the district for the prevention of the manufacture of illicit salt, and a small revenue is collected from licenses to manufacture saltpetre. In 1867-68 the revenue amounted to Rs. 1,832, in 1870-71 to Rs. 3,462, whilst in 1871-72 it fell to only Rs. 453. The following account of salt and salt manufacture in the district is, in substance, a note by the local Deputy Inspector, Mr. Ashton. The district contains salt (chloride of sodium), *khári* (sulphate of soda), and *sajji matti* (impure carbonate of soda), besides much land capable of producing saltpetre. The salt lands of the district lie for the most part close to the Jumna, but small saline patches are to be met with along the Káli Nadi, where the banks of the stream are low and possess the characteristics suitable to the efflorescence of the chloride. The salt lands near the Jumna comprise the *khádir* or lowlying lands adjacent to that river in the western corner of the Dádri parganah, and form a portion of the saline tract in the Meerut and Bulandshahr districts, formerly known as the "Gházi-abad salt mahál." They are bounded to the north-west by the Meerut district, to the north-east and north-west by the high land or *bángar*, in contradistinction to the *khádir* lands; to the west, south-west and south by the river Jumna, and to the south-east by the Dankaur *khári* tract. The first three boundaries are distinctly marked on the map, and the last may be delineated by tracing an imaginary line from the village of Garabpur on the edge of the high lands *vid* the villages of Surajpur, Garapur, and Bidauli to Kambakshpur on the river Jumna.

Formation of deposits.

The origin of these *khádir* lands appears to be capable of explanation; formerly it would seem that the Jumna ran a little to the eastward of Surajpur, *i. e.*, contiguous to the present high lands, but having in the course of time eaten its way, as it were, far to the westward, left in retiring a sandy expanse only a little above the ordinary level of the stream. On this sandy waste clay and mould became gradually deposited by the annual river floods, and vegetation such as *jháo* (tamarisk) and different grasses sprang up and annually added its quota of fertility to the soil and sand on which it grew, and thus in the course of time converted what was formerly an arid waste into the present fertile tract covered with populous villages and cultivated fields. It has been observed that the upper stratum of the soils on this tract is composed of a sandy loam, the next of loam, clay

and sand intermixed, then clay and sand, and lastly pure sand. The area of this salt tract is roughly about 62,000 bighas, of which about 25,000 are under cultivation and about 10,000 bighas are salt lands, or, in the vernacular, *kallar*. The salt lands mentioned are only those lands which are rendered unculturable by the excessive quantities of chloride contained in the soil, and do not represent all the lands impregnated with salt, as in point of fact nearly every bigha of the *khádir* lands contains more or less salt: nor do they show the extent of land capable of turning out salt if worked, as thousands of bighas which used formerly to yield salt have since the prohibition of the manufacture been reclaimed and now support rich crops, so that if the area of salt-producing lands was doubled there would be no exaggeration.

Appearance of the saline tract.

The saline efflorescence can be easily distinguished. In some localities it appears like coarse white flour scattered over the ground, in others it assumes a brownish tint and forms a crust on the ground which feels crisp when walked upon, and in others, when all the moisture has been evaporated by the heat, the soil is of a bluish black colour and very hard. A description of grass known as *kusa* grows all over the tract, and its presence is a sure sign of the existence of the chloride or sulphate in the soil. The *kusa* grass seems adapted to saline soils, as it grows where all other grasses are completely burnt up and destroyed by the action of the salts in the soil when these latter are drawn to the surface by capillary attraction. In some localities, however, even *kusa* succumbs and is completely burned up when the quantity of salt in the soil is excessive. Now comes the question—How and from whence comes the saline matter with which the *khádir* lands are impregnated? Some have attributed the presence of the salts to the adjacency of the river Jumna, which is said to bring down saline particles from towards its source, and then causes them to appear in efflorescence on the lowlands along it. But if this were the case, it would be natural to suppose that one particular salt would be deposited all along the course of the river, which is not the case, as both chlorides and sulphates appear under the same circumstances in different localities adjacent to each other. Added to this it will presently be seen that the Káli Nadi, which takes its rise in the Meerut district, throws up saline matter on its banks in precisely the same manner as the Jumna does.

Theory of origin.

It is very probable that the following is a correct explanation of the origin of the saline matter. It will be admitted that every stream flowing even through a flat country has an underground watershed through which the subsoil drainage flows, and the Jumna, which in this respect is not singular, has all along its course a stream of sub-soil drainage which is always flowing down its watershed and mingling with the waters of the river. This subsoil drainage to reach the river must pass through the *khádir*

lands where these exist, and as the last stratum of the soil of these is, as above shown, a layer of pure sand, the drainage passes through a very efficient natural filter, leaving the saline particles it contained behind it, which are then drawn to the surface of the lowlands by capillary attraction and appear as saline efflorescence. The theory seems a reasonable one, always supposing that the soil through which the sub-soil drainage passes contains saline matters, and that is far from being improbable. Thus when the prevailing salt in the highlands is chloride of sodium, that salt will assuredly appear on the lowlands below them if the substratum of sand exists to retain the saline particles and prevent their being carried into the river ; and the same reasoning applies to other salts. Forty-four villages, inhabited by about 17,000 people, exist in this salt tract, and on their lands 319 salt works, producing 413,300 maunds of salt, formerly existed. The most productive village in the tract was that of Mubárikpur, the annual outturn of which used to amount to 80,000 maunds. The greatest outturn of any one factory used to be 2,000 maunds, and the lowest outturn about 500 maunds.

Process of manufacture..

The process by which salt used to be manufactured was as follows :—When the erection of a factory had been determined upon, the first proceeding was to sink one or more wells on the site chosen. If the water in the wells proved to be saline, as was generally the case, the next step was to construct from three to four pukka solar evaporating pans called *kyáris*. The pans were composed of kunkur obtained from the neighbouring highlands, the bed being made of kunkur well rammed down and the lining of kunkur lime, and they were in size about 40 × 30 feet, with a depth of from ten to twelve inches. The number of pans to each work varied greatly, the most saline villages of course possessing the greatest number, and the least saline one, or perhaps two, to each factory. The pans were always constructed close to each other, each being on a lower level than the one immediately preceding it, so that any liquor poured into the first pan would flow with ease from one pan to the other till it reached the last. The next and last step in the construction of the factory was to construct the *gandas* or lixiviating troughs in which the saline earth was to be lixiviated. These were generally about 50 or 60 yards in length, about three feet in breadth, and one in depth, composed entirely of earth and clay, and were constructed on a level above the solar pans, so that the liquor from them might flow into these latter readily. The bottom of the filter was formed of clay beaten down till it was water-tight; brickbats and small stones were then strewn upon it, and on them straw or branches of tamarisk were evenly strewn. The filter was then complete. The saline earth and efflorescence was then collected from around the factory, filled into the filter, and the liquid pressed down with the feet, after which the saline water from the wells was suffered to flow in certain quantities into the filter, and

percolating through the saline earth and straw carried with it the majority of the saline matter in the earth through which it passed, and trickling down the bed of the filter which was constructed with a slight incline for the purpose, passed into the first and highest solar pan.

When the first solar pan became filled with the *ras* or brine from the filters, a passage was opened and it passed into the next, in which it was allowed to remain till a certain quantity had evaporated, when it was allowed to flow into the third, and so on till the last pan was reached, in which precipitation of the salt took place; and when it was observed that the crystals of salt were beginning to form, dry branches of *jhán* and *jawásа* were thrown into the pan, and to them the largest and best crystals adhered, a large quantity also falling to the bottom of the pan. When it was noticed that all the salt in the liquor had precipitated, and before the inferior and better salts began to drop, the *jhán* and *jawásа* branches were taken out and relieved of their load by a gentle shaking, and the salt at the bottom of the pan was scraped up and taken out and thrown away, then fresh liquor was let in, and a similar precipitation of salt took place. The salt when extracted from the solar pans used to be pitted for a few days to allow the mother liquor remaining in it to drain off and the more soluble and bitter salts that it might contain to deliquesce, after which it was ready for sale.

Quality of the salt.

The salt produced on this tract is said to have been of very good quality, the best being like Sultánpuri, and the inferior description like Balambha salt. It used to sell at about half a rupee for 20 sers for the superior descriptions, and about five annas three pie for the inferior and bitter sorts. The salt factories are said to have worked from time immemorial up to the year 1843 A.D., when Act XIV. of 1843 having been passed, the manufacture was entirely prohibited. Patches of saline lands are also to be met with on the banks of the Káli Nadi, where any *khádir* or lowlands, with a substratum of sand to act as a filter, exist. In fact all along the Káli saline matter in more or less quantity can be met with, but the most saline patches exist in the vicinity of the villages of Bara and Bhatwára in the southern corner of the Baran parganah, and the village of Pachgáon, a little lower down. The lowlands of the Káli near the city of Bulandshahr contain salt in small quantities which appears in efflorescence during the hot weather. No salt has ever been manufactured from the saline patches on the banks of the Káli Nadi, as the salt does not abound in sufficient quantities to pay for the work, especially when such a salt tract exists as the Ghaziabad salt mahals.

Other saline tracts.

Near certain villages of the Khúrja parganah and near the canal saline earth has been observed here and there, and analyses of samples showed that 7 to 5 per cent. of salt existed in the soil; but owing to the locality being low it was doubtful whether

the presence of the canal was the cause of the appearance of the chloride. Sulphate of soda *(khári)* is found in two localities near the village of Dankaur and elsewhere in the Dankaur parganah. The *khári* tract of Dankaur comprised all the *khádir* lands lying above the banks of the Jumna from the villages of Surajpur, Gujarpur, Bidauli, and Kambakshpur in the Dádri parganah, down to a point about six or seven miles below Dankaur, where the highlands trend towards and join the river. Nearly every bígha of the tract is impregnated with sulphate intermixed with a more or less quantity of common salt, which is always met with in company with the sulphate. Only one portion of the tract however has been worked, *viz.*, immediately below Dankaur, within a circle of about five miles including the villages of Salárpur, Jaganpur, &c. The remaining portions of the tract have never been worked, with the exception of one or two factories near Kásna, as, owing to the cheapness of *khári*, it could not be done at a profit. The manufacture of *khári* has been prohibted by the Customs Department, owing to the large percentage of salt contained in the *khári* earth and the consequent danger to the well-being of the salt revenue.

Origin of *khári* lands.

The origin of these *khári* lands appears to be exactly the same as that of the salt tract immediately above them, and the strata of the soils are precisely similar. Consequently, the theory above advanced with regard to the presence of salt in the salt tract holds good with reference to the *khári* in the *khári* tract, with this difference, that sulphates, instead of chlorides, abound in the highlands above the *khári* tract. During the year 1870, since which time the manufacture has ceased, there existed near the village of Dankaur about 95 *khári* works, yielding an outturn of about 45,000 maunds of sulphate of soda, which used to sell at about one and a half maunds per rupee. The process of manufacture was very similar to that which obtains in salt-making, the filters and wells being similar, and the *kyáris* or solar evaporation pans were much the same, with this difference, that no pains were taken to construct them on different levels. The practice was to allow the brine from the filters to flow into the pans till these latter were full, then to allow evaporation to take place, and then fill in more brine and so on till the pans were filled to the brim with a highly concentrated brine, and the salts in the liquor were then allowed to precipitate. The sulphates always fall first to the bottom of the pan and form a layer of a sort of dirty paste composed of minute particles of *khári*. When the sulphate has all deposited the chloride precipitates on it, and when all the remaining liquor has evaporated, both sulphate and chloride are scraped up in admixture, and the *khári* is ready for sale. The Jewar *khári* tract comprises all the *khádir* lands on the Jumna near Jewar. The origin of the lands and the causes of the presence of the chloride are precisely similar to those of the Dankaur *khári* tract. The process of manufacture was also exactly the same, and

the works were 85 in number in 1870, and produced about 43,000 maunds of *khári*. The works lie in a long line from Rámpur near the river down *viâ* Jewar and Gopálganj to the boundary of the Aligarh district, comprising a line about five miles in length.

Kinds of *khári*.

Khári is of two kinds—*bhegusa* or red *khári* and *safedi* or white *khári*; the former is an inferior kind and does not contain much salt in admixture, and the latter is considered the best, and contains sometimes as much as 60 and 70 per cent. of salt. Dankaur is capable of producing both descriptions, and Jewar only produces white *khári*, with sometimes 75 per cent. of salt in it. *Khári* is used in curing skins, tanning hides, and adulterating western salts. In curing skins, from one and a half to two and a half sers, and in tanning hides about the same quantity, of *khári* is used for each skin, and the white *khári*, containing a large percentage of salt, is preferred. In adulterating salt with *khári* the practice is to mix about a maund of *khári* with about ten maunds of salt; and when *khári* was manufactured in the district, it is believed that some thousands of maunds of it used annually to be mixed up in despatches of western salt going into Rohilkhand. *Sajji* (or carbonate of soda) lands are to be met with in the Bulandshahr district, but the substance is not manufactured in any quantity, all the carbonate used being imported from the lower Duáb. Patches of *sajji* efflorescence are to be met with near Khúrja and to the south-west of that town near the village of Arniya. There is also a patch of it near Surajpur, between that village and the village of Garabpur, and a few patches have been observed near Dankaur, Pahásu, and to the north-west of Jahángírabad:—all along the Ganges Canal and its *rájbahas* patches are to be seen, where under the name of *reh* and *úsar* it is spreading and rendering the lands on which it effloresces perfectly unculturable and barren. *Sajji* efflorescence can be easily distinguished, as it is white and effloresces to the depth of an inch or an inch and a half, and feels like sand under the feet. A pinch of the white powder placed on the tongue will be an infalliable test, as it will seem for the moment to cut it. The *sajji* lands of this district are only used when *kánch* or native glass is made. The efflorescence is gathered up into heaps, and the crust that forms on these is collected; when a sufficient quantity of this crust has been obtained, it is mixed with a small quantity of saltpetre and is then placed in a dome-shaped furnace and subjected to tremendous heat, till the *kánch* forms at the bottom; the *kánch* is then taken out and re-melted by bottle-makers and others when required.

Saltpetre.

Saltpetre is to be found in almost every village of the district in more or less quantities, and the villages capable of being worked for this substance must be some hundreds in number. The present state of the saltpetre trade, with its low prices and depressed condition, allows only 95 factories producing crude saltpetre and two refineries in

this district. Most of the crude works are situated in the Khúrja and Pahásu parganahs, the rest being scattered all over the district. The salts consumed in the district are Sámbhar, Lahori, and Sultánpuri, and at rare intervals a little Balambha and Dídwána are imported. The importations cannot be ascertained, as no trader will give any clue to the extent of his business, but four sers per head of the population of all kinds of salt will give a very fair approximate estimate. Sámbhar, Balambha, Sultánpuri, and Dídwána are imported from the great entrepôt of Dehli, and Lahori comes from the frontier by rail.

Kunkur.

Kunkur appears under three forms. First, small rounded drops, from the size of a pea to that of a bullet, in a matrix of clay and sand often of great depth, but seldom separated into distinct homogeneous strata. Secondly, in distinct strata of larger masses from the size of a small potato to that of a man's foot, with a matrix of clay or of clay and sand mixed. In such cases the clay and sand strata are generally distinct. Thirdly, in what is improperly termed stratified kunkur (almost all kunkur occuring in strata). In this form it presents extensive fields, from one to five feet in thickness, generally very rugged and porous, but occasionally separable into compact masses of a hundred solid feet or more. On considering the shapes of the granulated masses, they will be found to resemble the figures assumed by molten lead when plunged into water. The substance appears to be generally clay and carbonate of lime, the latter falling away freely under the action of the furnace, and leaving the clay in the form of a hardened mass more or less vitrified. The formation of kunkur appears to be effected by the infiltration of rain-water impregnated with lime through a bed of clay, or to be, in fact, tufa deposited in clay or a sponge of clay saturated with carbonate of lime.

Building materials. Stone.

The only building stone that is much used in the district is block kunkur, which is found at Farhadpur, Jhont, Shahpur, Madanpur, Lodhi, Jarauli, and Akbarpur in this district. The cost at the mouth of the pit is about Re. 1-4-0 per 100 cubic feet. Lime costs Rs. 9 per 100 maunds. Inferior bricks are manufactured at all the large towns. Bricks measuring $10 \times 5 \times 2\frac{1}{2}$ to three inches cost Rs. 6-8-0 per 1,000, and those measuring $10 \times 5 \times 1\frac{1}{2}$ inches about Rs. 5 per 1,000; firewood costs Rs. 22 per 100 maunds. Wood for building purposes is scarce in the district. *Sál* beams from 30 to 40 feet in length and one to two feet in thickness cost Rs. 2 per cubic foot in Sikandarabad. *Shísham* is used for doors and furniture principally, and costs Re. 1-12-0 per cubic foot, *ním* 12 annas, and *jáman* 14 annas. Mango wood is used for planks and doors, and costs from 10 to 18 annas; *jhigan* 12 annas; *hara* 13 annas; *parhal* 14 annas, and *babúl* four or five annas per cubic foot. Thatching

Bricks.

Wood.

grass sells at 280 bundles for a rupee ; *bhábar* string at 24 sers per rupee, and *múnj* string at 17½ sers. Kunkur for metalling roads is found all over the district; the cost at the mouth of the pit is twenty annas per 100 cubic feet, or Rs. 12-8-0 per 1,000 ; when the length of lead is within four miles, the carriage costs Rs. 6-4-0 per mile for 1,000 cubic feet, beyond that distance Rs. 5 per mile. Consolidating costs one rupee per 100 cubic feet.

Kunkur.

PART II.

INHABITANTS OF THE DISTRICT.

THE enumeration of 1847 gives the total population at 699,093 souls, distributed as follows:—Of Hindús, agriculturists 309,237, non-agriculturists 261,614. Musalmáns and others not Hindús, agriculturists 43,761, non-agriculturists 84,481, which shows a very large proportion of non-agriculturists (346,095) to those employed in cultivating the soil (352,998), and this was the case in reality, for besides those dependant upon daily and monthly wages, numbers of both the Hindú and Musalmán families were in service abroad, leaving their families and relatives independent of labour at home who in no small degree swelled the number of non-agriculturists recorded. At this time there were 1,612 villages in the district, of which 1,456 were inhabited, and of these 1,343 had a population under 1,000, 104 had a population between 1,000 and 5,000, and the remaining nine were Sayána, 5,744; Anúpshahr, 8,947; Jahángírabad, 9,369 ; Shikárpur, 9,838; Dibái, 7,837; Jewar, 5,835; Baran, 12,049; Khúrja, 18,653, and Sikandarabad, 14,843. The total population gave 376 to the square mile.

Population. Census, 1847.

The census of 1853 was the first regular census. It gives for Bulandshahr a total population of 778,342 souls, or 427 inhabitants to the square mile. The general result of this enumeration is shown in the following table, which gives the sex, religion, and occupation of the inhabitants of the district taken as a whole :—

Census of 1853.

HINDÚS.						MUSALMÁNS AND OTHERS.					
Agriculturists.		*Non-agriculturists.*		*Total.*		*Agriculturists.*		*Non-agriculturists.*		*Total.*	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
182,783	152,925	154,520	143,468	337,303	296,393	24,512	23,259	49,164	47,711	73,676	70,970

In comparing these with the figures above given for 1848, it must be remembered that in the interval thirty-five villages were transferred to Dehli from parganah Dádri and one to Aligarh, causing a net decrease in area of 20,186 acres. The number of villages was also reduced to 1,576, of which 98 were uninhabited. Of the inhabited villages (1,478), 1,346 had less than 1,000 inhabitants, 121 had between 1,000 and 5,000, and those above 5,000 were as in 1848, with the addition of Dankaur (5,203) and Aurangabad (5,463).

Census of 1865.

The census of 1865 returns the total population of all sexes, ages and creeds at 800,431 souls, or 419 to the square mile. The same broad division into agriculturists and those professing other callings was adopted in 1865, and may be briefly shown in the following table :—

Religion.	Agricultural.					Non-agricultural.					Grand total.
	Males.		*Females.*		Total.	*Males.*		*Females.*		Total.	
	Adults.	Boys.	Adults.	Girls.		Adults.	Boys.	Adults.	Girls.		
Hindús ...	116,357	73,805	100,037	55,174	345,373	98,599	60,018	97,175	49,806	305,598	650,971
Musalmáns and others	16,550	9,795	15,160	8,723	50,228	30,556	19,053	32,019	17,604	99,232	149,460
Total ...	132,907	83,600	115,197	63,857	395,601	129,155	79,071	129,194	67,410	404,830	800,431

Below this, for convenience of comparison, I give the same statistics taken from the census returns of 1872 :—

Religion.	*Landowners.*		*Agriculturists.*		*Non-agriculturists.*		*Total.*	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Hindús ...	8,512	7,078	211,838	181,041	183,578	168,525	403,958	356,644
Musalmáns ...	3,169	3,260	23,558	21,853	62,949	61,111	89,676	86,224
Christians ...	...	...	4	...	44	43	48	43
Total ...	11,711	10,338	235,400	202,894	246,571	229,679	493,682	442,911

In 1865 there were 1,592 villages, of which 559 had less than 200 inhabitants, 576 had between 200 and 500, 316 had between 500 and 1,000, 89 between 1,000 and 2,000, 42 between 2,000 and 3,000, and ten above 5,000, containing all those mentioned in 1848, with the addition of Galáothi. Dankaur, and Aurangabad, mentioned as having more than 5,000 inhabitants in 1853, have

gone below that number in 1865. Altogether the figures show no great move towards urban life, and very little change of any importance in the relative position of any of the great classes of inhabitants.

Census of 1872.

The census of 1872 must next be referred to as giving the most complete enumeration of the people that has hitherto been attempted. The returns show a total population of 936,593 souls, or 490 to the square mile. Of these 760,602 were Hindús, 175,900 were Musalmáns, and 91 were Christians, and others neither Musalmán nor Hindu. There were 1,566 villages in the district in 1872, giving 0·8 villages to each square mile and an average of 598 inhabitants to each village. There were 388 villages having less than 200 inhabitants, 617 with from 200 to 500, 369 with from 500 to 1,000, 138 having from 1,000 to 2,000, 30 having from 2,000 to 3,000, 12 with from 3,000 to 5,000, and twelve towns with more than 5,000 inhabitants. These last comprise the same towns as mentioned in 1865 with the addition of Jhájar and Dankaur. In giving the parganah details it is as well to compare the statistics of the four enumerations together. They are given in the following table, in which Musalmáns, except in 1872, include Christians and others not Hindu :—

Density.

Parganah.	1847-48.		1853.		1865.		1872.	
	Hindu.	Musalmán.	Hindu.	Musalmán.	Hindu.	Musalmán.	Hindu.	Musalmán.
Agauta, ...	33,452	12,172	37,176	13,758	38,842	14,670	45,420	16,734
Baran, ...	43,881	21,930	48,440	24,249	52,725	26,062	60,822	29,395
Shikárpur, ...	26,465	6,658	29,158	8,049	27,638	7,584	34,697	7,826
Sayána, ...	45,875	7,886	49,751	8,406	53,742	8,604	59,088	10,358
Ahár, ...	31,532	8,856	34,684	9,572	40,120	10,154	49,248	11,800
Anúpshahr, ...	50,402	10,144	55,247	11,199	53,356	11,165	56,993	12,580
Dibai, ...	59,034	8,583	67,553	9,363	63,684	8,459	72,247	10,810
Khúrja, ...	61,270	13,383	72,220	16,438	73,112	17,566	86,206	21,015
Pahásu, ...	34,310	5,333	38,732	6,114	40,026	7,063	48,590	8,046
Jewar, ...	30,000	4,010	34,350	4,346	42,996	6,384	49,874	7,445
Sikandarabad, ...	54,785	11,486	61,718	13,777	62,291	13,090	74,645	17,314
Dankaur, ...	33,898	7,192	38,707	8,548	39,126	10,173	47,105	10,046
Dádri, ...	57,435	9,114	55,698	9,156	63,313	8,486	75,667	12,531
Rabupura, ...	8,512	1,495	10,262	1,671	...	...	...	...
Total, ...	570,851	128,242	633,696	144,646	650,973	149,460	760,602	175,900

To the total number of inhabitants in 1865 must be added 411 Hindús and 105 Musalmáns in military or railway employ. The number of Hindu males in 1872 was 403,958, or 53·1 of the entire Hindu population ; Hindu females number 356,644, or 46·9 per cent. Musalmán males number 89,676, or 50·9 per cent. of the entire Musalmán population, and their females were 86,224, or 49·1

per cent. The percentage of Hindús on the total population is 77·8, and of Musalmáns is 22·2, or two Musalmáns to every seven Hindús. The percentage of males on the total population is 52·7, and of females 47·3, while the divisional percentage is 54·0 and 46·0 respectively.

Infirmities.

Statistics relating to infirmities were first collected in 1872. They show that in that year amongst the total population of the district there were 84 insane persons (24 females), or 0·8 per 10,000 of the population; 41 idiots (14 males), or 0·4 per 10,000 of the inhabitants of every creed and sex; 151 were deaf and dumb (43 females), or 1·6 per 10,000; 2,637 were blind (1,266 females), or 28·2 per 10,000 of the population; and there were 376 lepers (47 females), or four in every 10,000. The blindness is due in a great measure to inoculation in small-pox cases, a practice which can hardly ever be thoroughly eradicated.

Age.

Statistics of age were also recorded for the first time during 1872. The following table gives the numbers of Hindús and Musalmáns according to sex at different ages, with the percentage on the total population of the same religion. The columns referring to the total population include the inhabitants of all creeds, but preserve the sex distinction:—

Age.	*Hindús.*				*Musalmáns.*				*Total population.*			
	Males.	Percentage on total Hindús.	Females.	Percentage on total Hindús.	Males.	Percentage on total Musalmáns.	Females.	Percentage on total Musalmáns.	Males.	Percentage on total population.	Females.	Percentage on total population.
Up to 1 year, ...	23,308	5·7	22,807	6·3	5,232	5·8	5,045	5·8	28,545	5·7	27,853	6·2
Between 1 and 6, ...	66,461	16·4	59,906	16·7	14,371	16·1	14,436	16·7	80,844	16 3	74,347	16 7
„ 6 „ 12, ...	60,736	15·0	45,010	12·6	13,630	15·1	11,274	13·0	74,370	15·0	56,294	12·7
„ 12 „ 20, ...	67,506	16·7	56,373	15·8	14,202	15·8	13,544	16·8	81,716	16·5	69,921	15·7
„ 20 „ 30, ...	73,204	18·1	68,806	19·2	16,237	18·1	16,510	19 1	89,449	18·1	85,325	19·2
„ 30 „ 40, ...	52,406	12·9	46,511	13·0	11,610	12·9	10,954	12·7	64,021	12·9	57,469	12·9
„ 40 „ 50, ...	32,681	8·0	29,173	8 1	7,480	8·3	7,148	8·2	40,166	8·1	36,325	8 2
„ 50 „ 60, ...	18,301	4·5	17,810	4·9	4,367	4·8	4,494	5·2	22,669	4 5	22,306	5 0
Above 60, ...	9,355	2·3	10,248	2·8	2,547	2·8	2,819	3·3	11,902	2·4	13,071	2·9

The proportion of Hindu males between 10 and 13 to the total population is 5·7; of Hindu females 4·3; of Musalmán males 5·8, and of Musalmán females 4·4. Taking the ages between 10 and 20, the proportion of Hindu males to the total population is 21·5; of Hindu females 19·4; of Musalmán males 20·7, and of Musalmán females 19·4. Taking the quinquennial terms of age up to 15, *viz.*, 0 to 5, 5 to 10, and 10 to 15, the proportion of both sexes to the total

population is 20, 12·3, and 9·3 per cent. respectively; whilst taking the females only, the percentages are 20·5, 11·7, and 8·1, in the first period slightly in excess of the males, and in the other two considerably below them. In England the proportions for both sexes for these periods is 13·4, 11·6, and 10·4 per cent., and for females 13·0, 11·3, and 10·1. Here we see a smaller proportion in the two first periods and an increase in the third period in England; the falling off in Bulandshahr occurring amongst the female population. The male population for the third period is 10·4 in Bulandshahr and 10·8 in England. This would lead to the suspicion that a portion of the female population arriving at the marriageable age has escaped the enumerators, for beyond 15 the proportions previously established begin again to appear.

Castes.

Distributing the Hindu population, numbering 760,602 souls, amongst the four great classes, we have Brahmans numbering 98,932, of whom 46,709 are females; Rajpúts 75,633, of whom 34,049 are females; Baniyas 44,966 (21,199 females), and the great mass of the population included in the "the other castes" of the census returns gives 286,384 males and 254,687 females. The Brahmans principally belong to the great Gaur division, which here numbers 81,461 souls. The head-quarters in this district is parganah Shikárpur, where Lachhman Singh, the leading man of this community, holds 23 villages. The Gaurs ascribe their origin to the kingdom of that name in Bengal, but more probably the name refers to north-eastern Oudh; they hold shares in 81 villages in this district. The Bháts number 621 souls and are divided into three classes; the Brahma Bháts, or reciters of the sacred hyms; the Jágás, who are pedigree-keepers; and the Chárans, who act as guards. They hold Zainpur in parganah Agauta free of revenue, besides four villages in other parganahs. The Nágars (266) or Gujráti Brahmans were in possession of portions of Ahár previous to the Musalmán invason, whence they were driven by the Badgújars and Patháns. Some of them became converts to Islám, and up to 1857 the Musalmán branch possessed 8 villages; some then became rebels, and their estates, consisting of four entire villages and the greater part of the village of Ahár, were confiscated. The Hindu Nágars now hold 2 villages, and their Musalmán clansmen hold 3½. Gautam Brahmans (415) came from Rohilkhand 200 years ago, and hold four villages in parganah Shikárpur. The Rahtis or Bohras (278) came from Pali in Márwár and devote themselves to money-lending. They are nick-named *kaiyán*, from continually using the word "*káin*" ('why,' 'wherefore,') and *athbárya*, from taking interest every eighth day. Sanádhs (5,613), supposed to be a branch of the Kanaujiya, are found in large numbers in Rámghát and Belaun. There are a few Chaubes (212), one family of whom is known as *mítha* (sweet) and another as *karwa* (bitter). Altogether the Brahmans held 70 entire villages in this district at settlement besides fractional shares in others. The principal subdivisions not already named are the

Acháraj (238); Bánsiwála (30); Chaurasiya (392); Dása (99); Gujráti (445); Jotishi (274); Kanaujiya (452); Márwári (13); Upádhiya (856); Páthak (380); Sarsútiya (706); Sarwariya (35); Tiwari (28); unspecified (6,118).

Rajpúts.

The Rajpúts form the most important element amongst the land-owning and cultivating classes, and amongst the Rajpúts the Badgújars, who numbered 13,116 souls in 1872. The Lálkháni family are Musalmán Badgújars, amongst whom the Pahásu family hold 31 villages at the recent settlement, the Chhatári family held 33, the Dánpur family 22, the Dharmpur branch 28, and the Pindráwal branch 24. A further account of these families is given subsequently. Other Badgújars held 99 villages in Bulandshahr in 1866, giving a total of 237 villages in the hands of this tribe, or nearly one-seventh of the total area.[1] Their possessions are chiefly scattered over parganahs Baran, Shikárpur, Dibái, Pahásu, and Khúrja. They settled here about seven to nine hundred years ago under Partáb Singh, driving out the Meos and Dors. Tod says[2] the Badgújars emigrated from Rajor in Mácheri, one of the principal divisions of Dhúndír, to this district. They give the same account of themselves, and trace their descent from Lava, the elder son of Ráma, like the Gahlots. They are of the solar race, and were driven from their former seats by the Kachhwáhas. From Partáb Singh's son, Játu, the Badgújars of Rohilkhand are derived, and of these we have an early notice in the Ráthor genealogies, which makes Bharat, the eleventh grandson of Nayan Pál, "conquer Keneksir under the northern hills from Rudrasen of the Badgújar tribe." Nayan Pál is supposed to have lived in the fifth century, and this would perhaps give an extravagant antiquity to the settlement of the Badgújars at present existing in the Duáb. This much may, however, be advanced, that their colonies came here long anterior to the Musalmán invasion. Almost all the Badgújars of the district, whether Hindús or Musalmáns, are divided into five families: Lálkháni, Ahmadkháni, Bikramkháni, Kamálkháni, and Ráimáni. The Musalmán appellations were adopted during the reign of Jahángír. With the exception of some of the Lálkháni, they all continue their Hindu customs. They paint on their doors at weddings, and pay reverence to a figure representing the Kahárin who gave the first footing in the district to their ancestor Partáb Singh. They do not kill kine, nor do they marry into their own *gotra*, and they generally give two names—a Hindu and Muhammadan one—to their children. Many of them retain the Hindu honorific prefix of Thákur.

Bais and others.

The Bais (4,706) call themselves true Tilokchandi[3] Bais, and say that they came from Dundiakhera in Oudh in the twelfth century. They held shares in 18 villages, chiefly in Dibái, at the recent settlement. The Bhál Rajpúts (3,155), also called Bhála Sultán,

[1] Exclusive of acquisitions subsequent to the year of measurement. [2] Reprint I, 106.

[3] See Mr. W. C. Bennett's note on the Bais of the Rái Bareli district, Oudh Set. Rec., 1866.

occur chiefly in parganah Dibái, but hold 76½ villages in the Khúrja parganah, of which 32½ villages belong to the heads of the Hindu branch and 44 to the Musalmán Bháls. With the permission of Sultán Ghaiás-ud-dín Tughlik they entered this district. Sisodiya Gahlots (3,851) hold shares in 25 villages in the north-west corner of the district, and came here with Khuman Rao, *alias* Gobind Rao, son of the Raja of Chítor in Pirithiráj's time. The Panwárs (1,372) in early times held considerable possessions in the district and were contemporaries of the Meos and Dors in Dibái; they now hold but 4 villages, whilst a spurious branch, called Khidmatias, hold 4 villages in parganah Baran. Chhonkar Rajpúts of the Jádon clan took possession of Jewar under their leader Ahardeo or Deopál, and expelled the Mewátis of that parganah; they now have shares in 30 villages, chiefly in Jewar. Gaurwas (1,643) formerly held Málágarh, then known as Ráthora, which was purchased from them by Hakdád Khán, Amil of Baran, the grandfather of the notorious rebel Walidád Khán. They also at one time owned a great part of the Ahár and Sikandarabad parganahs, from which they were ousted by the Patháns. Jaiswárs (2,961) hold in 40 villages, of which about one-half are in Jewar. Jádons (11,769) have 20 villages in Khúrja and Jewar, and Bargalas (3,995) hold 32 villages in this district and 20 more on the west bank of the Jumna. The Chauháns (9,910) of the royal stock of Dehli possess shares in 45 villages in different parganahs. In Agauta they formerly held 32 villages known as the *Chauhánon-ke-battísa*, but of these they now retain only two entire villages, with shares in thirteen others. Omitting the Bhál and Badgújar tribes, Rajpúts held at the recent settlement altogether 151 entire villages besides numerous shares. The Dors (248), descendants of the former rulers of the district, are now of little account. They are found in Moradabad, Banda, Ságar, and Aligarh. Tod says that, though occupying a place amongst the thirty-six royal races in "all the genealogies, time has destroyed all knowledge of the past history of the tribe." Aligarh still shows 86 and Meerut 107 members of the clan.

The Rajpút clans not separately noticed and occurring in this district are the Bhadauriya (230), Báchhal (1,125), Baghel (125), Bhatti (1,031), Banáphar (7), Baskhar (87), Baiswár (8), Chandel (3,674), Dhákara (306), Dhengar (57), Durgbansi (106), Gaharwár (103), Gola (59), Janghára (3,755), Jaroliya (2,568), Jutiána (112), Jojit (349), Katehiriya (75), Kachhwáha (710), Kachhaura (20), Lathor (204), Mandwál (32), Mashair (105), Maharwár (79), Mathúriya (266), Mori (299), Methal (23), Niraul (217), Pundír (183), Porach (36), Ráthor (435), Ráwat (183), Riwari (86), Rajoriya (14), Sikharwar (84), Surajbansi (172), Solankhi (653), Sarwal (58), Sengar (27), Tomar (807), and unspecified (221).

Baniyas.

The Baniyas chiefly belong to the great Agarwál class, who number 26,383 in this district. Baranwáls, called after Baran or Bulandshahr, strange to say, are only set down at 110.

Next to the Agarwáls come the Chausaini (7,575), Dása (4,559), Bárahsaini (1,839), Saraugi (863), Rastogi (839), Dhámi (791), Jaiswár (482), Dhúsar (297), Mahesri (227), Gurákhu (162), and Bohra (159) divisions. The remainder, including the Bhalyapuri, Dewari, Gaharwál, Jaini, Khandelwál, Kasarwáni, Lohiya, Máhur, Mithal, and Rautgi subdivisions, have less than 100 members each. Baniyas hold 36 villages in the district, nearly all of which have been acquired under the British rule.

Other castes.

The majority of the inhabitants of Bulandshahr, as in every district in these provinces, comprises a number of castes who have no pretensions to rank either as Kshatris or Brahmans or among the trading community. The following list gives the castes comprised under this head according to the census of 1872 :—

Agarei,	...	466	Hajjám,	...	15,377	Meo,	...	1,328
Ahar,	...	870	Ját,	...	56,453	Mochi,	...	186
Aheriya,	...	2,073	Jotshi,	...	1,037	Najúmi,	...	46
Ahir,	...	13,951	Juláha,	...	142	Nat,	...	621
Banjára,	...	354	Káchhi,	...	2,017	Nunera,	...	356
Bansiwál,	...	12	Kahár,	...	19,418	Orh,	...	6,585
Barhai,	...	6,800	Kalál,	...	2,078	Parákha,	...	54
Bári,	...	164	Kanjar,	...	403	Pási,	...	32
Bhaddri,	...	188	Káyath,	...	4,006	Patwa,	...	24
Bharbhúnja,	...	1,187	Khági,	...	223	Riwari,	...	69
Bhát,	...	1,815	Khákrob,	...	29,501	Saisi,	...	29
Bhosia,	...	365	Khas,	...	31	Sikalgar,	...	3
Bohra,	...	735	Khatík,	...	16,588	Shoragar,	...	40
Bisáti,	...	25	Khatri,	...	1,227	Sonár,	...	4,493
Chamár,	...	146,129	Kori,	...	226	Taga,	...	6,755
Chhipi,	...	1,514	Koli,	...	17,618	Tamoli,	...	306
Chauhán,	...	2,605	Kumhár,	...	13,378	Teli,	...	881
Dabgar,	...	54	Kurmi,	...	456	Bairágí,	...	2,215
Darzi,	...	2,735	Lodha,	...	51,513	Bramhachári,	...	1
Dhánuk,	...	158	Lohár,	...	1,719	Fakír,	...	83
Dhobi,	...	6,491	Mimár,	...	918	Gosháin,	...	4,408
Dhúna,	...	3,689	Máli,	...	11,255	Jogi,	...	5,777
Gadaria,	...	13,400	Malláh,	...	2,304	Sádh,	...	24
Ghosi,	...	214	Manihár,	...	114	Márwári,	...	64
Gújar,	...	48,786	Mína Meo,	...	135	Mína,	...	3,376
Habúra,	...	5	Mirdaha,	...	179	Purbiya,	...	242

The Tagas here, as in Meerut, comprise an important element of the population. They hold 23 villages, and are possibly degenerate Brahmans, as noted by Tieffenthaler in the last century. This writer also combats the notion of the Játs being connected with the ancient Getæ, a subject noticed under the Meerut district. The Ját Raja of Kuchchesar holds 102 villages, whilst Raja Gursahái, also a Ját, has 14 villages, and other Ját landholders possess 69. The Lála Babú's estate comprises 54 villages in this district; another Káyath landholder is Lachhman Sarúp of Sikandarabad, who holds 28 villages, whilst other members of the same tribe possess 22 villages. The Gújars, too, are numerous, holding 91 entire villages. Those belonging to the Bhatti and Nágari clans occupy the khádir of the Dankaur parganah, and have as bad a reputation as their brethren in the south-west of the Meerut district: they are also numerous in Dádri. Ahírs hold four villages in Dádri, thirteen in Sikandarabad, and three in other

parganahs. Ahars hold twelve villages and Hindús of various castes hold eighteen more. Hindu Meos and Dors, now landless, once owned the greater portion of this district and the south of Meerut. The former bear a very bad reputation as thieves and dakaits, and carry on their depredations from the Duáb throughout Rajputána and the North-Western Panjáb.

Musalmáns.

The Musalmán population at the recent census showed 20,318 Shaikhs, 6,198 Sayyids, 2,611 Mughals, 12,491 Patháns, 1,329 Mewátis; the large number of 7,811 Musalmán Rajpúts and the descent of 125,142 is unspecified. Amongst the Patháns are included Bilúches and Afgháns, of whom there are several considerable colonies. The Sayyids held altogether 75 villages in 1866, amongst which the Khánpur family possessed 18 and the Aurangabad family 32. The Bilúches of Chanderu hold 16 villages and the Jhájhar family possess ten, while three others are held by independent branches of the same race. The Patháns of Jahángírabad have 12 villages, those of Malakpur hold 25, and other Patháns have 48 villages. Musalmán Mewátis possess four villages, and Shaikhs, Mughals, and others hold 24.

Christians.

The Christian inhabitants, though few in number, possess a large share of the district. The Skinner estate of Biláspur comprises 63 villages, and some further account of the family is given hereafter.

Occupations.

The distribution of the population into the two great divisions of agriculturists and those following occupations unconnected with the cultivation of the soil has been sufficiently noticed in the preceding pages. The agriculturists as a body will be described hereafter, and here we have chiefly to speak of the subdivisions of the non-agricultural classes. The whole population was divided, for the purposes of the census of 1872, into six great classes, each of which had several subdivisions, and included all the male adults engaged in the occupations it represents. The first or professional class embraces all Government servants, soldiers and persons following the learned professions, literature, the arts and sciences, and numbered 3,748 male adults (not less than fifteen years of age), amongst whom are included 1,176 *purohits* or family priests, 1,368 pandits, 195 *baids* or physicians, 412 singers, &c. The second class numbered 35,381 members, and comprised all males engaged in domestic service as cooks, washermen, sweepers, water-carriers, and the like. The third class represents commerce and numbered 19,568, amongst whom are all persons who buy or sell, keep or lend money and goods of various kinds as money-lenders (1,213), shop-keepers (14,734), bankers (755), and all persons engaged in the conveyance of men, animals or goods, as pack-carriers, ekka-drivers, porters, &c. The fourth class includes persons possessing or working the land as proprietors (7,299), cultivators (141,269), ploughmen, gardeners and nut-growers, and every one engaged

about animals, as shepherds, graziers, &c.; they numbered 149,819 male adults. The fifth class, containing 38,376 members, included all persons engaged in industrial occupations, the arts and mechanics, in the manufacture of textile fabrics and dress, of articles of food and drink, as well as dealers in animal, vegetable, and mineral substances. The sixth class contained 50,328 males, including labourers and others (44,194), persons of independent means (44), and persons supported by the community and of no specified occupation. Altogether there are 297,220 males classified by occupation in this district, nearly one-half of whom belonged to the agricultural population.

Habitations.

The houses in the district are usually surrounded by a wall containing one door for entrance or exit which leads first into a courtyard, known as the *mardána*, or men's apartment, and beyond this a second enclosure leads into the *zanána*, or portion of the house set apart for females. Each of these inner enclosures contains a courtyard, with open sheds all round, in which the servants, animals or other property are usually stored. The wealthier classes often have houses three to five stories high and ornamented with verandahs, but, as a rule, the arrangement within is very bad: the rooms are very close and low, and ventilation or conveniences for cleanliness have never even been thought of. A small mud-built house will cost about Rs. 20, and a brick-built house from Rs. 1,000 upwards. The Vaishnava temples are for the most part solidly constructed, with a special chamber or shrine for the idol and a kind of verandah outside for the worshippers. The Shaiva temples have a dome-like structure often ornamented with small pine-shaped slabs and other carvings in high relief.

The census of 1872 gives the number of enclosures inhabited by Hindús as 68,345, whilst Musulmáns occupied 19,001 and Christians 7, or a total of 87,353. This shows 45 enclosures to the square mile and ten persons to each enclosure. The separate houses numbered 182,694, distributed as follows:—

Class of house.	Inhabited by			Total.	Inhabitants.
	Hindús.	Musalmáns.	Christians.		
Built with skilled labour,	10,576	3,760	5	14,341	74,846
With unskilled labour ...	138,658	29,687	8	168,353	861,747
Total ...	149,234	33,447	13	182,694	936,593

This return gives 95 houses to the square mile and 5·1 inhabitants to each house. The proportion of persons inhabiting the better class of houses in the total population is only 7·9 per cent., whilst the divisional average is 10·2 per cent., showing a low standard of comfort in this district.

Customs.

The system of referring caste differences and matters of custom to the headman of the clan or community is in force in this district. He either settles the matter himself or refers it to a committee of the brotherhood. In former days the mode of decision was formal and systematic. After hearing evidence on both sides, and the statements of the parties, a regular précis of the proceedings and a finding was drawn up. This practice has to some extent been abandoned, but enough remains to show its former character. The headman is known by different names among the different castes. Amongst the Brahmans, Játs, Chhípís, Náis, and Kahárs they are called Chaudhis; among the Lodhas *Mukadams*; amongst the Gújars *Padháns*; amongst the Baniyas *Chokraits*; and amongst Telis, Chamárs and Kanjars, *Mihtars*. There is one to each class in every town, and sometimes two. The Brahmans have also headmen, known as *Sardárs*, who have great influence among their own brethren and the inferior castes, and are in receipt of valuable perquisites on the occasion of marriages, births, &c. They have also the power of excluding from caste, the most terrible of all punishments to a native. Among the higher classes the system of panchâyats is seldom followed. One frequent rule among the lower castes is that suckling a child of another caste is a breach of caste rules; and in all engagements of wet-nurses caste-money forms a portion of the agreement. But it is as a court of divorce and matrimonial causes generally that the panchâyat is usually assembled and its decrees sought. Woe to the peccant member if he has not money enough to feed the large assemblies on such occasions, and by his generosity induce them to temper justice with mercy. The Náis or barbers seem to have the most perfect caste organization of all the tribes in this and the Meerut districts. There are four head-quarters:—Bulandshahr, with 360 villages divided into four tappas, with a tappadár to each and attendant chobdár or javelin man; Sikandarabad, with 52 villages; Hápur, with 210, and Dásna with 360 villages. The members are summoned according to a roster by the chobdár when any business is to be brought forward. Chaudhris of trades are usually utilized merely for the contract of supplies, and are not paid or officially recognized.

Language.

The language in use in the district is Hindi in the villages; *khári boli*, a medium between pure Hindi and pure Urdu, is spoken by the Hindús in the towns and Urdu by the Muhammadans. While there is no peculiar dialect spoken in any part of the district, each parganah and almost every clan has some Shibboleth of its own; thus the Gújars pronounce the long 'á' something like 'o', as *nom* and *kom* for *nám* and *kám*. The Játs of Sayána and Agauta use *mhára* and *thánrá* ('mine' and 'thine') for *mera* and *tera*. The language in use in the courts was at first Persian, and subsequently Urdu with an abnormal Persian element. The Hindús

generally, excepting the Káyaths, are in favour of the introduction of the Nágari character into official proceedings.

Education.

Education in the district is under the supervision of the Inspector of the 1st or Meerut Circle, in concert with the local committee, of which the Collector is President. The enumeration of 1845 showed only 187 indigenous schools in Bulandshahr, of which 46 were in the towns and 85 in villages, in which Persian and Arabic were taught, and in the remainder Hindi was the object of instruction. There were 587 Muhammadan pupils and 1,226 Hindús, or only one boy under instruction out of every 385 persons, or one out of every 32 boys of a school-going age. In 1854 tahsíli schools were opened, and in the same year, with the assistance of the zamíndárs, the halkahbandi or village schools were established. The inferior zila school was opened in 1867, and the present building was erected by subscription in 1868. The first English school was opened and maintained by Mr. G. D. Turnbull in 1855. The present Anglo-vernacular schools, which are among the best in these Provinces, are maintained by the proceeds of an endowment subscribed for by the zamíndárs in 1863-64. They are placed at Bulandshahr, Khúrja, Dibái, Jewar, Sikandarabad, and Anúpshahr. The Government female schools were established in 1859. The aided vernacular school belongs to the Church Missionary Society, and the aided female schools to the Local Educational Committee. The following table gives the statistics of education for 1860-61 and 1871-72, showing that there are now 6,955 pupils, or one to every 135 of the total population :—

	Class of school.	1860-61.			1871-72.							
						No. of pupils.						
		No. of schools.	No. of pupils.	Cost.	No. of schools.	Hindús.	Musalmáns.	Others.	Average daily attendance.	Cost per head.	Proportion borne by State.	Total charges.
				Rs.						Rs. a.	Rs. a.	Rs.
Government.	Zila (Inferior)...	...	...	...	1	55	21	...	77	36 4	29 8	3,083
	Tahsíli ...	4	429	1,656	4	318	142	...	375	4 12	4 2	2,033
	Halkahbandi ...	125	3,576	12,000	101	3,052	780	...	2,969	3 5	1 10	12,310
	Female ...	2	16	101	12	223	1	...	179	3 7	3 7	807
Aided.	Anglo-vernacular	...	...	...	4	138	23	...	126	30 0	12 11	3,810
	Vernacular ...	...	...	...	1	16	17	4	32	10 5	2 11	276
	Female ...	...	...	...	6	53	37	...	75	9 4	8 0	700
	Indigenous ...	217	1,861	9,590	172	1,165	914	...	1,794	4 3	...	8,752
	Total ...	388	5,882	23,347	301	5,020	1,935	4	5,627	...	...	31,771

Census statistics.

An attempt was made at the census of 1872 to collect some information on the state of education amongst the people. Though not to be considered accurate or trustworthy, the results are tabulated here for future reference. The statement shows the number of Hindús and Musalmáns who can read and write (literate), and the percentages of the same to the total population of the same religion, sex and age. The Christian population is so small that the statistics referring to it have been omitted :—

Ages.	Hindús.					Musalmáns.				
	Males.			*Females.*		*Males.*			*Females.*	
	Number.	Literate.	Percentage.	Number.	Literate.	Number.	Literate.	Percentage.	Number.	Literate.
1 to 12 ...	150,505	2,182	1·4	127,723	2	33,233	515	1·5	30,755	*Nil.*
12 to 20 ...	67,506	2,825	4·1	56,373	...	14,202	555	3·9	13,541	
Above 20 ...	185,947	10,378	5·5	172,548	7	42,241	1,628	3·8	41,925	
Total ...	403,958	15,385	...	356,644	9	89,676	2,698	...	86,224	

These figures show the room that exists for the extension of education amongst the people. Taking all religions, only 1·4 per cent. of the males up to twelve years of age can read and write; 4·1 per cent. of those between 12 and 20, and 5·2 per cent. of those above 20 years of age. In other words, nearly 95 out of 100 grown-up persons in the Bulandshahr district are destitute of even the elements of primary education. Much has undoubtedly been done of late years to remedy this evil, but much more remains to be accomplished.

Post-offices.

There were nineteen imperial post-offices in the district and fourteen district offices in 1870-71. The imperial offices are Bulandshahr, Anúpshahr, Biláspur, Chhatári, Chola Railway Station, Dádri, Dibái, Galáothi, Jewar, Jahángírabad, Jhájar, Khúrja, Aurangabad, Pahásu, Sikandarabad, Sikandarabad Railway Station, Shikárpur, Sayána, and Rájghat. The district offices are Ahár, Ahmadgarh, Chaudera, Dánpur, Dankaur, Járcha, Kásna, Khánpur, Rabupura, Rámghát,

Satthla, Sarái Sadr, Surajpur, and Arniya. The statistics of these offices for the year 1870-71 were as follows :—

Year.	Receipts.						Charges.					
	Miscellaneous savings, fines.	Passengers and parcels.	Deposits, guarantee funds, family funds.	Remittances.	Postage.	Total receipts.	Charges fixed and contingent salaries, &c.	Mail services.	Remittances.	Other charges, refunds, advances, printing.	Cash balances.	Total charges.
1870-71 ...	207	...	70	10,302	8,296	18,875	9,659	636	8,435	20	125	18,876

The following table gives the number of letters, newspapers, parcels, and books received and despatched during 1861-62, 1865-66, and 1870-71 :—

	1861-62				1865-66.				1870-71.			
	Letters.	Newspapers.	Parcels.	Books.	Letters.	Newspapers.	Parcels.	Books.	Letters.	Newspapers.	Parcels.	Books.
Received ...	64,911	3,909	1,069	492	84,814	5,190	1,014	572	149 143	9,019	541	1,463
Despatched,	66,315	491	366	112	73,610	4,611	346	163	123,697	4,283	461	183

Since 1871 offices have been opened at Khúrja Railway Station and Bálka. These are all under the Inspector of the Aligarh Division. Up to 1871 the district offices were under the village schoolmasters, who received a small remuneration for their trouble.

Jails.

There is but one jail in the district, the statistics of which are as follows. The average number of prisoners in jail in 1850 was 264 in 1860 was 127, and in 1870 was 137; the ratio per cent. of this average number to the population, as shown in the census of 1865 (800,431), was in 1850, ·032; in 1860, ·015; in 1870, ·017. The number of prisoners admitted in 1860 was 1,321, and in 1870 was 735, of whom 20 were females. The number of persons discharged in 1870 was 618. In 1870 there were 231 admissions into hospital, giving a ratio of admissions to average strength of 93·26. One prisoner died, or ·72 of the average strength. The cost per prisoner per annum in 1870 was for rations, Rs. 17-14-5; clothing, Rs. 2-4-6; fixed establishment, Rs. 16-1-4; contingent guards, Rs. 8-5-3; police guard, Rs. 4-3-10; and additions and repairs, Re. 0-15-4; or a total of Rs. 49-13-6. The total manufacture during the same year amounted to

Rs. 2,292, and the average earning of each prisoner Rs. 16-11-8. In 1870 the Muhammadan prisoners numbered 165 and the Hindús 486. There were 17 prisoners under 16 years of age, 575 between 16 and 40, 131 between 40 and 60, and 9 above 60. The occupations of the majority of the male prisoners were agriculturists, 359; labourers, 140, and shop-keepers, 43.

Police.

The chaukidárs or village watchmen numbered 2,005 in 1871, or one to every 335 inhabitants. Their cost is met by an allotment from the provincial budget of Rs. 36 each per annum. There are, besides these, 197 chaukidárs in the four municipalities and 190 in the towns managed under Act XX. of 1856. The regular police under Act V. of 1861 were, in 1871, 864 men of all grades, costing Rs. 1,01,299, of which Rs. 78,619 were paid from imperial funds. Proportion of regular police to area, one to 2·20 square miles; to total population, one to every 926 inhabitants. The following statement shows the crime statistics for a series of years:—

Cases cognizable by the Police.						*Value of property.*		*Cases.*			*Persons.*			
Year.	Murder.	Dacoity.	Robbery.	Burglary.	Theft.	Stolen.	Recovered.	Total cognizable.	Under inquiry.	Prosecuted to conviction.	Brought to trial.	Convicted and committed.	Acquitted.	Proportion of convictions to persons tried.
						Rs.	Rs.							
1865 ...	7	3	15	406	823	36,075	11,602	1,564	1,020	314	935	765	146	81·8
1867 ...	1	...	8	240	688	37,492	10,829	1,298	682	249	594	456	120	76·7
1868 ...	9	1	10	443	792	33,578	13,396	1,618	868	280	763	562	177	73·6
1870 ...	8	1	7	406	440	24,855	9,852	1,267	783	352	748	538	210	72·5
1871 ...	3	5	10	705	504	30,781	9,071	1,644	1,054	475	1,346	1,206	140	89·59
1872 ...	13	4	7	784	662	32,525	12,218	1,726	1,724	385	1,070	827	55	77·29
1873 ...	9	3	6	626	601	72,222	21,245	1,599	1,599	479	1,167	835	65	71·55

Not one of the five cases of dacoity in 1871 was detected. These and the more heinous crimes seem to be perpetrated by organized bands who watch travellers proceeding by rail and attack marriage processions and travellers in the interior. Cattle-stealing, house-breaking, and petty theft are the prominent offences of the district. For the first, the extensive *khádir* of the Jumna and the large Gújar population are the chief causes, but of late years it has been noticed that the Gújars are gradually substituting labour and agricultural pursuits for their hereditary occupation of thieving. The police-stations are Anúpshahr, Dibái, Jahángírabad, Rámghát, Khánpur, Ahár, Khúrja, Jewar, Pahásu, Arniya, Sikandarabad, Dankaur, Jhájar, Járcha, Kásna, Surajpur, Dádri, Sarái Sadr, Bulandshahr, Shikárpur, Sayána, Aurangabad, and Galáothi, with outposts at Mámán, Bodha, Kot, Makanpur, Chhapraula, Chola, Bhúd, Chitsaun, and Barál.

Infanticide.

In consequence of the orders issued under Act VIII. of 1870 regarding the practice of female infanticide in this district, the Magistrate sent up three lists in 1871: one contained the names of 83 villages which he considered guilty; the second had the names of 176 suspected villages; and the third had 162 villages which the police authorities declared came within the rules for repression. In March, 1871, Rajpúts were proclaimed in 17 villages, Játs, principally of the Tewattia sept, in 23; Gújars in 33; Ahírs in 4; and Mína Meos in six villages, giving a total population of 25,311 souls, amongst whom 5,454 were boys and 3,502 were girls. The rules were introduced into these villages from the 1st of April, 1871. Further information was asked for before dealing with the remaining suspected villages, and in August, 1873, the Government directed a comparison with the census returns of 1872, and at the same time revised the list. The number of Rajpút villages proclaimed was reduced to nine, Játs to 17, Gújars to 17, and Ahírs to one village, whilst further inquiries were directed in regard to the Mína Meos. The inquiries in 1874 have led to recommendations for the exemption of numerous villages.

Fiscal history.

The present district, as already noticed, was formed in 1824, and up to that time belonged partly to Aligarh and partly to Meerut and Muradabad. In 1211 *fasli* (1803-04 A.D.) the western parganahs were settled by Colonel Ochterlony, at that time in charge of the Dehli territory. The eastern parganahs, then in the Aligarh district, were in a disturbed state owing to the rebellion of Dúndi Khán, and an account of their settlement more properly belongs to the Aligarh district. The land-revenue of this district for 1804-05 was close upon twenty lakhs of rupees, of which nearly one-half was remitted on account of losses occurring from the operations against Dúndi Khán, the irruptions of Holkar and Amír Khán, and the marching of Banjáras with grain to supply Lord Lake's troops at Muttra and Bhartpur (Bhurtpore).

Early settlements.

The first three settlements of the ceded parganahs received from the Aligarh district were made in that district under Regulation XXV. of 1803 (1210 to 1219 *fasli*), and the three settlements of the conquered parganahs received from Aligarh were also made in that district under Regulation IX. of 1805 (1213 to 1222 *fasli*). The fourth settlement of the ceded parganahs was extended by Regulation XVI. of 1816 for five years, and again by Regulation VII. of 1822 for a second five years, and by Regulation II. of 1826 for a third term of five years or up to 1239 *fasli* (1831-32 A.D.) Similarly the term of settlement of the conquered parganahs was extended by Regulations IX. of 1818 and IX. of 1824 for periods of five years ending in 1237 *fasli* (1829-30 A.D.) The first four settlements of parganahs Thána Farída, Sayána, Dádri, and Shakrpur were made by the Collector of Meerut whilst they formed a portion of that district, but the revision under Regulation

VII. of 1822 for all the parganahs, was commenced in Aligarh before the formation of this district in 1824 A.D. Mr. Tierney examined the revenue resources of some six hundred villages, and after him came Mr. G. M. Bird in 1834-35, who made nearly the entire settlement, but died before its completion. Mr. T. Tonnochy, Deputy Collector, ultimately revised and completed the settlement in 1837 A.D. In 1841, parganahs Pahásu and Jewar, which had up to 1836 formed a portion of the Sumru *jáyír*, were brought under settlement. Parganah Sayána was assessed in the Meerut district by Sir H. M. Elliot, and was transferred to Bulandshahr in 1844 A.D. Up to 1844 the comparison of the earlier settlements with that at present in force is difficult, owing to the changes caused by the transfer of parganahs and villages from one district to another, and the alteration of the boundaries of the parganahs within the district. Neither the name, area nor revenue of the existing parganahs correspond exactly with those mentioned even in the report of the twenty years settlement. This expired on the 30th June, 1859, and preparations for its revision were commenced as early as 1856, but were interrupted by the mutiny. In 1858 the new assessment was commenced by Mr. Charles Currie, who completed the revision of parganahs Agauta and Baran; he was followed by the late Mr. Freeling, who assessed Anúpshahr, Shikárpur, Dibái, and Pahásu; the late Mr. Lowe finished Khúrja and Jewar, and Mr. R. Currie the remainder of the district. The revision of the assessment of the whole district with regard to the question of a permanent settlement was undertaken by the last officer, whose report containing the final results as determined by himself and his predecessors was made in 1865. Owing to the proposals for the permanent settlement having taken the form of progressive assessments, Mr. Webster was directed to re-revise the assessment of those villages (380 in number) in which a progessive assessment had been made, and carried out his work in 1865-66. Again in 1867 a second condition (Circular S. B. R. 54 of November 27th, 1867) was added to those on which a permanent settlement should be based, and this was "that estates the assets of which are likely to increase within the next twenty years should be excluded," and to discover these estates another general revision was ordered. The late Mr. J. G. Robertson, under the superintendence of Mr. Cairnes Daniell, commenced this work, and while it was in progress orders (Circular S. B. R. 3 of June 13th, 1866) were received for taking engagements from the proprietors for a land-revenue calculated at fifty-five per cent. on the rental assets and for the revision of the records, and in May, 1868, inquiries were further directed towards the general incidence of the revenue, as many supposed that it was too light.[1] On the departure of

Present settlement.

[1] The correspondence and reports connected with the revision of assessment in this district would fill several volumes. Its statistics and the conclusions drawn from them formed an important part of the papers relating to the controversy as to the propriety of a permanent settlement during 1868-71.

Mr. Robertson these inquiries were continued in 460 villages in all, and completed by Kunwar Lachhman Singh, Deputy Collector. Finally in June, 1871, Government sanctioned a settlement for thirty years, or to the end of 1888-9 A.D., accepting the assessment at first determined on as having been adequately framed under the recognized principles of settlement existing at the time when it was determined (G.O. No. 1019A. of June 28, 1871). Such is briefly the history of the settlement of the land-revenue in this district.

Mode of assessment.

As to the mode of settlement adopted, it would appear that all the officers concerned in the temporary revision of settlement fixed their rent-rates on the prevailing average rates of rent for different classes of soil; average rents and rents paid in lump sums, and *zabti* or cash rents for particular kinds of produce were ascertained, and from the average of these the average rent-rates were calculated, and the different classes of soil were valued by the application of these rates. These rates, too, in many instances, appear to have been the guide for the adjustment of rent-rates in the various parganahs; variations in assessments being made to suit, as much as possible, the peculiar circumstances of each village.

The following statement gives the revenue statistics at different periods:—

Year.	Total area in acres.	*Assessed area.*		*Unassessed area.*		Land-revenue.	Incidence per acre on total area.	On assessed area.	On cultivated area.	Number of villages.
		Cultivated.	Culturable.	Barren.	Revenue-free.					
						Rs.	Rs. a. p.	Rs a. p	Rs. a. p.	
1848 ...	1,187,280	675,918	361,886	58,952	90,524	10,74,587	0 14 6	1 0 6	1 9 5	1,612
1853 ...	1,167,094	715,587	143,260	220,211	88,036	10,56,835	0 14 6	1 3 8	1 7 8	1,576
1859 ...	1,197,162	678,765	364,575	64,177	89,645	11,32,728	0 14 9	1 1 0	1 10 1½	1,595
1865 ...	1,221,373	777,196	260,270	138,099	45,808	12,74,926	1 0 9	1 3 8	1 10 1¼	1,595
1871 ...	1,219,971	779,392	260,895	137,930	41,704	13,66,208	1 1 11	1 5 0	1 12 0¼	1,893[1]

[1] The number for 1871 is of mahâls or estates not villages. The number of mahâls in 1859 was 1,803.

The following statement gives the official account or land-revenue balance sheet from 1860-61 to 1872-73 :—

Year.	Demands.	Collections.	Balances.	Particulars of balance.				Percentage of balance on demand.
				Real.				
				In train of liquidation.	Doubtful.	Irrecoverable.	Nominal.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1860-61 ...	11,10,174	9,61,076	1,49,098	1,34,438	242	6,871	7,547	13·43
1861-62 ...	11,09,235	10,73,122	36,113	12,747	...	...	23,366	3·25
1862-63 ...	11,10,276	10,58,588	51,688	5,270	325	39,388	6,605	4·65
1863-64 ...	11,09,068	10,62,574	46,494	1,075	...	38,739	6,680	4·19
1864-65 ...	11,34,857	10,76,814	58,043	1,731	...	39,737	6,575	5·11
1865-66 ...	11,34,857	10,76,480	58,427	...	...	51,852	6,575	5·15
1866-67 ...	11,98,064	11,72,756	25,308	...	22,481	...	2,827	2·11
1867-68 ...	11,77,779	10,78,401	59,378	...	52,884	...	6,494	5·22
1868-69 ...	11,38,709	70,78,421	60,288	464	53,330	...	6 494	5 29
1869-70 ...	11,38,709	10 93 580	45,129	2,689	35,946	...	6,494	3·96
1870-71 ...	11,38,709	10,94,754	43,985	967	37,224	...	6,494	3·86
1871-72 ...	13,66,047	13,56,616	9,431	1,711	868	...	6,852	0·19
1872-73 ...	12,40,758	12,32,792	7,956	767	874	...	6,315	0.13

Leading families.

Bulandshahr is one of the few districts in these provinces possessing a wealthy indigenous landed aristocracy. In other districts there are men with larger estates and more wealth than the landowners of this district can boast of, but here the family of the founder still remains in possession of the ancestral estates in the midst of his clan, and is able to exercise an influence on the people for good or evil which no auction-purchaser can hope to aspire to. A brief notice of each of the principal families is therefore necessary to give a correct idea of the people of the district.

Badgújars, Lálkháni family.

The ancestors of the Lálkháni family were Badgújars (Bargújars) who settled in the district about 1185 A.D. It is said that the immigration of the Lálkháni branch was due to the invitation of Prithiráj, the Chauhán ruler of Dehli, who invited their assistance in the great war with the Chandels of Mahoba. The Bulandshahr tradition makes Partáp Singh the leader, and relates that he undertook the cause of an injured Kahárin who lived near Kheriya and released her husband, who had been taken prisoner by the Mína Meos of Kheriya. The Rajpút troops suffered severely in the contest, the Kahár was killed, and the Kahárin became a *sati*. With her dying breath she invoked the blessings of heaven on her gallant deliverer, and promised him the sovereignty of the surrounding country. This was partly fulfilled, a few days after, by the marriage of Partáp Singh with

the daughter of the Dor Raja of Koil, with whom he received 150 villages as dowry. Partáp Singh joined the Chauhán army in the Mahoba campaign, and on his return settled at Pahásu in the centre of his newly acquired estate, where he rapidly acquired great power. According to Tod the Badgújars are the descendants of Lava, the elder son of Ráma, and were expelled from their ancient settlements in Rajawar or Rajor in Mácheri of the Jaipur State by the Kachhwáhas. From Partáp Singh's son, Játu, the Badgújars of Katehir are derived. The eldest son, Ránu, remained in this district, and his son Bínráj removed the head-quarters to Chaundera, which long continued the principal seat of the family. The Barauli family of Badgújars in the Aligarh district trace their origin to Raja Rájdeo of the solar race, who ruled at Mácheri. The grandson of Rájdeo married a sister of Prithiráj, and their son Partáp Singh joined the forces of his uncle in the great Chauhán war. The Aligarh legend makes Partáp Singh the leader of an army against Kumaun, not Mahoba. His camp was pitched amongst a cluster of Meo villages, and was plundered by the people of the neighbourhood. In revenge for this, he attacked the Meos and defeated them, and as reward received 175 villages as dowry with the daughter of the Dor Chieftain of Koil. On his return from Kumaun the Raja settled in Barauli and increased his possessions to the number of 1,656 villages. The Barauli Badgújars call themselves the elder branch, and say that the title of Rao now borne by them was conferred on their ancestors by Prithiráj himself, as an honorific appellation to be borne by the elder branch alone. They claim descent from Ránu, the eldest son of Partáp Singh, and say that the Lálkháni Badgújars are descended from Játu. From Basant Pál, another son, come the Badgújars of taluka Majhaula in the Budaun district; those of taluka Jadwár, in the same district, are descended from Badhon Deo, a fourth son, and the Badgújars of taluka Narauli, in the Moradabad district, are descendants of Háthi Sáh, a fifth son.

Dor inscription of Prithiráj.

As to the cause of the settlement of the clan in the Duáb, an inscription of Prithiráj shows that he engaged in a war with the Dors, and thought his victory over them important enough to cause it to be recorded on stone. In this conflict the Badgújars were important allies of the conqueror, and, notwithstanding the romantic story of the daughter of the Raja of Koil, received from Prithiráj their first lands as the ordinary wages of mercenary troops. This theory has probability on its side even if it takes away a little from the glory of Partáp Singh's achievements. Eleventh in descent from Partáp Singh came Lál Singh, who was a great favourite of the Emperor Akbar, and received from him the name of Lál Khán: hence this branch of the family is known by the name Lálkháni. Saliváhan, a son of Lál Kláu, received from the Emperor Shahjahán in 1049 H. (1639 A.D.) proprietary rights in sixty-four villages around Pahásu, which was formed into

a parganah known as Saliváhanpur. Itmád Rái, the son of Saliváhan, lost every thing by his carelessness and weakness, and we hear nothing of the family for some generations. During the reign of Aurangzíb the family became Musalmáns, and in the seventh generation Sháh Alam granted to Náhar Ali Khán in 1188 H. (1774 A.D.) the taluka of Pítampur. During the Marhatta occupation Náhar Ali Khán opposed General Perron, and his estates were confiscated and conferred upon his nephew Dúndi Khán. Both of these men opposed the British in 1803, and an account of their rebellion and the confiscation of their estates will be found under the history of the Aligarh district. Previous to this Náhar Ali Khán had divided his estate amongst his relatives: Dúndi Khán, his nephew, received 30 villages; Náhar Ali Khán retained 30 villages, with head-quarters at Pítampur; Mardán Ali Khán two villages, with Chhatári, and Sardár Ali Khán two villages. Dúndi Khán was pardoned and went into exile, and his son Ranmast Khán was confirmed in all his ancestral possessions. Notwithstanding this lenity Ranmast Khán again rose in rebellion, and his estates were confiscated and conferred upon Mardán Ail Khán. Ranmast Khán was again pardoned in 1820 and allowed to live in the Aligarh district, on a pension of Rs. 500 per month; he died in 1839. Ashraf Ali Khán and Mazhar Ali Khán, brothers of Ranmast Khán, have also deceased. The latter had two sons, Rahím Ali Khán and Amrao Bahádur. Of these Amrao Bahádur was adopted by Ashraf Khán and joined the rebels in 1857 with his father and brother and perished in the siege. Mazhar Ali Khán and Rahím Ali Khán were both subsequently taken prisoners; the former died whilst on his way to trial, and the latter was transported for life. So ends the story of the nephews of Náhar Ali Khán.[1]

Náhar Ali Khán.

Náhar Ali Khán was also ousted by the Marhattas and retired to Imláni. He subsequently joined them in their attacks on the Panjáb, and was restored to his former estates. He opposed the British with Dúndi Khán, and in 1805 his fort of Turkipura was taken and his lands were confiscated.[2] On his death they were restored to his son Akbar Ali Khán, who settled at Pindráwal. Akbar Ali Khán's only son died at an early age in 1844, and on the death of Akbar Ali Khán himself, his widow, Karím-ul-nissa, managed to keep the property together, but subsequently

[1] The following are references amongst the Board's records to this family: - September 18, 1804, No. 21: February 22, 1805, No. 4: 22nd October, 1805; 2nd January, 1806, No. 5. Parganahs Noh, Khair, Pítampur, and Shikárpur were settled with Ranmast Khán. His claim to remissions allowed. 15th August, 1806, No. 2; 2nd September, 1806, No. 23. Unable to settle with him, he refuses to give up accounts, so that a force was sent after him and his father, on the approach of which he fled. 3rd July, 1807, No. 12; 25th September, No. 15; 29th September, No. 1; 31st October, 1807, No. 32. [2] Board's Records, 3rd June, 1806, No 1; 14th October, 1806, No. 1; 19th May, 1809, No. 15; 23rd May, 1809, No. 3; 7th March, 1817, No. 4.

quarrels arose between Latíf-ul-nissa, the daughter of Akbar Khán, and Fahím-ul-Nissa, the widow of his son. The former married Kásim Ali Khán, the Sayyid Talukadár of Kutáya in the Umballa (Ambála) district, in the Panjáb, and their son, Bákir Ali Khán, received by arbitration 24 out of 38 shares into which the villages comprising the Pindráwal estate was divided, and is the existing incumbent. He also holds large estates in parganahs Koil, Khair, and Atrauli of the Aligarh district.

Mardán Ali Khán.

Mardán Ali Khán,[1] though a near relative of Dúndi Khán, sided with the British and received in reward the greater portion of Dúndi Khán's estates. He extended his property by judicious purchases, and on his death left to his five sons about 124 villages in this district and 60 in the Muttra and Aligarh districts. The widow of one son took the majority of the villages in the Muttra estates, and the remaining four sons founded the following estates in this district :—

(1.) *Dánpur estate*, owned by Kunwar Wazír Ali Khán, son of Mardán Ali Khán, and now a pensioned Deputy Collector, consists of 22 villages in parganah Dibái. His son died in 1857, and he has adopted his daughter's son, Mashúk Ali Khán, who is the present manager of, and declared heir to, the estate.

(2.) *Dharmpur estate*, founded by Muhammad Zahúr Ali Khán, son of Mardán Ali Khán, comprises 29 villages. On his death, whilst on pilgrimage at Medina in 1872, his estates were divided amongst his three sons and the widow of a fourth. Zahúr Ali Khán received 13 villages from his father, 4 from Government in 1858, and purchased 12 others.

(3.) *Pahásu estates*, founded by Murád Ali Khán, son of Mardán Ali Khán, is now in possession of the sons of Murád Ali Khán : *viz.*, Faiz Ali Khán, C.S.I., prime-minister of the Jaipur State, Imdád Ali Khán, and three others. The estate has recently been divided amongst the brothers by private arbitration.

(4.) *Chhatári estate.*—Muhammad Mahmúd Ali Khán of Chhatári received a large estate from his father Mardán Ali Khán, to which Málágarh was added for services during the mutiny, and many villages were purchased, making over 42 villages in this district, containing some of the most valuable estates in the district. In the Aligarh district he possesses large estates, in parganahs Koil, Murthal, Khair, and Háthras.[2] Mahmúd Ali Khán is an Honorary Magistate since 1862.

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[1] For the history of Mardán Ali Khán see Board's Records, 9th May, 1806, Nos. 10, 11 ; 5th September, 1806, No. 15 ; 19th September, 1806, No. 4 ; 16th September, 1806, Nos. 9-13 ; 9th June, 1808, No. 66 ; 7th October, 1809, No. 2. [2] Board's Records, 1 and 19, 11th November, 1806, No. 9 ; 13th May, 1866, No. 5 ; 6th June, 1815; 5th December, 1822, No. 1 ; 25th August, 1823, No. 1 ; 29th October, 1823, No. 6.

Anúpshahr estate.

Amongst the Hindú Badgújars, the most important was the family that founded the Anúpshahr estate. Anúp Rái was a gate-keeper of the seraglio in Akbar's time, and attached himself to the person of Jahángír. The latter, in his memoirs, relates that Anúp Rái saved his life whilst out tiger shooting, and in doing so showed such boldness and courage that he rewarded him with the the grant of a *chaurási*, or eighty-four villages, in *jágír* on each side of the Ganges, with the title of *Raja Ani Rai Sinha Dalán* ('the foremost among Rajas and the vanquisher of tigers'). Raja Ani Rái first built Jahángírabad and then removed to Bhador as more centrical, and called it, after his own name, Anúpshahr. Sixth from Ani Rái came Achal Singh, whose two sons Tára Singh and Mádho Singh divided the hitherto single estate among themselves. Tára Singh took Anúpshahr and Mádho took Jahángírabad. Tára Singh died without issue, and the three sons of Mádho Singh redistributed the estate. Umed Singh got possession of Anúpshahr, and Khoras Ráj and Bhawani Singh took Jahángírabad. Shortly after the British occupation of these provinces, Raja Sher Singh, son of Umed Singh, was rewarded for his defence of Anúpshahr, against Dúndi Khán in 1805, but subsequently sold the whole of his zamindári, except Sarora and another village, to Raja Kishan Chand, called also the Lálá Bábu of Páikpára in Calcutta, and late husband of the Ráni Katyáni. Thus 72 villages comprising the Anúpshahr estate were disposed of. Twelve villages out of these 72 were sold for arrears of revenue in 1815-16, on the Lálá Bábu turning fakír. Owing to alterations in the arrangement of the parganah in 1844, only 48 villages of the Anúpshahr estate now lie within the Anúpshahr parganah. The Ráni Katyáni is the registered proprietor, but the entire profits from these villages form the endowment of a Hindú temple at Brindaban in the Muttra district. This property has for several years been under the Court of Wards. The last villages remaining to Ráni Jíwan Kunwar Badgújarin, daughter of Sher Singh, were sold in 1865 to Zahúr Ali Khán of Dharmpur. Of the 22 villages belonging to Khoras Ráj, eleven were sold in 1220 *fasli* (1812-13) and purchased at auction for Nawáb Mastafa Khán, by Martaza Khán, a Risáladár in Sindia's army, who received the *jágír* of Palwal from Lord Lake. Khoras Ráj sold five villages to Ibádullah Khán of Khánpur, and six villages passed into the hands of Rái Sidha Lál by a fraudulent transaction, of which Ráni Suraj Kunwar was the victim. Other members of the family still hold a few villages in the Budaun and Moradabad districts, but not a single acre of their once splendid estates is now held in this district in the direct line. Some Brahmans make a living by reciting the history of this family.

Afghans.

Family of Sayyid Mír Khán Paghmáni, Sirdár Bahádur. The Sirdár is a Muswi or Mashadi Sayyid, and was a resident of Paghmán, about six *kos* from Kábul, who on account of

services rendered to Alexander Burnes in his Kábul Mission, and subsequently to the English in their retreat from Kábul, was rewarded with a pension of Rs. 600 a month. On this account he was expelled from Kábul and settled with his uncle Ján Fishán Khán, another Kábuli refugee, at Sárdhana, in the Meerut district. For his services in the mutiny the Sirdár received Rs. 200 per mensem additional pension and ten villages from the Khánpur estate, to which he has added much by purchase, and he is now one of the leading land-holders. He is much esteemed by the Europeans for the courage shown by him, on many occasions, in their behalf, and naturally, perhaps for the same reason, disliked by the natives.

Skinner estate.

Colonel James Skinner, C.B., was the son of a Scotchman in the East India Company's service, who had married a Rajpút lady. His life has been written by Mr. Fraser[1] from whom we learn that Skinner at an early age entered the Marhatta service and attained to high command under DeBoigne. When the latter dismissed his European officers, Skinner took service under Lord Lake, only stipulating that he should not be asked to fight against his former master. He received eleven villages as a perpetual revenue-free grant for his services, and was made a Companion of the Bath.[2] He then took up his residence at Biláspur, the centre of his *jágír*, where he built a strong fort, and added considerably to his possessions by judicious purchases. He died in 1842, leaving five sons who were to enjoy the profits of the one hundred villages composing the estate. Mr. Alexander Skinner, well known as Sikandar Sáhib, is now the manager. Mr. Thomas Skinner kept down mutiny in his portion of the district in 1857, for which he received fifteen villages as a reward, but these have been so mismanaged by his son, a somewhat dissipated young man, that it was found necessary to place them under the Court of Wards in 1872.

Málágarh estate.

The founder of the Málágarh estate was Hakdád Khán, Amil of Baran, who in 1783 obtained possession from the former proprietor for a rent-free grant of 75 bíghas. In 1793 he was ejected by the Marhatta leader Madho Rao Phalkiya, and retired to Muradabad. His son, Bahádur Khán, obtained in 1805 the lease of 34 villages, at a fixed revenue, in Agauta, and among them Málágarh, and also the lease of 15 neighbouring villages. These remained in the possession of his descendants until, in 1857, Walidád Khán, son of Bahádur Khán, being related by marriage to the Dehli family, espoused their cause and set himself up as governor of the district.

[1] Skinner's life by Fraser, 2 Vols., Lon., 1838. The following references to the Board's Records are connected with the Skinner estate:—7th July, 1807, No. 26; 24th December, 1808, No. 13; 16th June, 1809, No. 31 A.; 28th June, 1809, No. 21; 7th July, 1809, No 25; 2nd April, 1810, No. 41, 18th August, 1809, No. 21; 8th September, 1809, No. 28 (3); 9th January, 1819 [2] Confirmed by G. O. 26th September, 1826.

After plundering the neighbouring villages he was met by the British at Baran and totally defeated. His property was confiscated and divided among those who assisted in the pacification of the district.[1]

Khánpur estate.

The Khánpur estate once comprised some 225 villages in this and the adjacent districts, and was founded by one Allu Afghán in the reign of Shahjahán, whose head-quarters were at Ghautu Nasírabad, the name of which he changed to Khánpur Ghautu. The seventh in descent, Abdúl Latíf Khán, opposed the British in 1857, and was punished by transportation for life and the confiscation of all his property, consisting of 75 villages in full proprietary right and 10 villages in mortgage. The greater part of his estate was conferred in reward on Sayyid Mír Khán Sirdár Bahádur.

Malakpur estate.

The Malakpur estate consists of 32 villages, of which 21, including Malakpur, are in parganah Anúpshahr. Abdúl Rahman Khán, the father of the present owner, Faiz Ahmad Khán, of Datauli in the Aligarh district, purchased this property about forty-five years ago from Mr. Mercer, an indigo planter, who had a factory at Malakpur, and had purchased his villages from time to time from the resident proprietors, mostly Patháns.

Játs of Kuchchesar.

Sir H. M. Elliot in his Púth report notes the grasping character of Rao Fateh Singh, the representative of the Kuchchesar family from 1816 to 1829, and gives some interesting particulars concerning the family which deserve reproduction here. The family belongs to the Dalál *gotra* and was founded by four brothers, Bhuál, Jagrám, Jatmal, and Gúrwa, who came from Mandoti in Hariána about 180 years ago. The first three settled in the village of Chitsona in parganah Sayána, and Gúrwa took possession of lands in parganah Chandausi in the Muradabad district. Bhuál was succeeded by Manji Rám, who had two sons, Rái Singh and Chhatar Singh. Chhatar Singh took service with Mirza Ali Beg, *jágírdár* of Chitsona, and during the troubles that ensued managed to secure a great portion of his master's estate for himself. He was the first of the family that attained to any power. He had two sons, Magni Rám and Ramdhan Singh. Both of them joined the Játs of Bhartpur in the campaign undertaken by Jawáhir Singh to avenge the death of his father Suraj Mál. Najíb-ud-daula found means to induce them to abandon the Bhartpur Játs, and to retain them on his side, he granted to them Kuchchesar in *jágír*, with the title of Rao and the office of *chormár*, or "destroyer of thieves," for the nine surrounding parganahs, as well in order to restore order as to restrain the Ját leaders themselves from committing depredations. They then seized upon a large number of villages in parganahs Sayána,

[1] Board's Records, 8th August, 1825, No. 8; 12th September, 1825, No. 3; 20th April, 1826, No. 4. See 'history' *postea*.

Púth and Thána Farída, and continued their plundering expeditions unchecked until the merchants of Mákri complained to Afrásyáb Khán of Koil and induced him to proceed to chastise these rievers.

Afrásyáb Khán restrains the Játs.

In 1773 Afrásyáb Khán captured and sacked the Ját forts of Kuchchesar, Sayána, and Shakratila. Ramdhan, Magni Rám and their families were taken prisoners and brought to Koil. Here they managed to effect their escape, and fled first to Sirsa and eventually to Muradabad, where they obtained employment under the Marhattas. Three or four years afterwards Magni Ram died, some say at Sirsa, and others at Kuchchesar. He left three sons, Sukhi, Rati Doulat, and Bishan by one wife, and four by another (Jawáhir, Híra, &c.), but it was to his favourite wife, Bhawan, that he intrusted an amulet, in the inside of which was pointed out the spot where his treasure was concealed in Bhawan Bahádurnagar. She agreed to sell her secret to Ramdhan, the brother of Magni, on condition that he married her, as was customary among the Játs. Ramdhan agreed to his, but as soon as he obtained the treasure refused to carry out his share of the compact, and used the money for his own aggrandisement and the ruin of his brother's family.

Ramdhan.

Ramdhan succeeded to the whole estate in 1790, and obtained an *istimrári sanad* or perpetual lease from Sháh Alam of parganahs Puth, Sayána, Thána Farida, and talukas Datiyana and Sayyidpur, at a yearly revenue of Rs. 40,000. This grant was confirmed by Mirza Akbar Shah, the heir-apparent of Sháh Alam, in 1794, and again by the British Government in 1803. Rao Ramdhan died in prison in Meerut in 1816, and on his death the grant was settled with the original proprietors, but the *jágir* of Kachchesar Khás was granted revenue-free in perpetuity to his son, Rao Fateh Singh, by Lord Moira in the same year. Ramdhan Singh had behaved very badly to his nephews. He is said to have killed Rati and other sons and grandsons of his brother. The rest of the family fled to Idnagar, and about five or six years after they had settled in that village, implored the aid of Dayaji, the Marhatta amil of Meerut, who gave them Chhajupur near Meerut and some other villages on a fixed lease. Other members of the family settled in other villages of this and the Meerut district, and Fateh Singh, on his accession to the estate, gave them some small allowance as maintenance. One of them, Rao Partáb Singh, subsequently obtained a share of the estate.

Fateh Singh.

When Mr. Wilkinson proceeded to settle the estates on the death of Ramdhan Singh, he is said to have directed all present to range themselves into two ranks, one representing the *mukadams* and inferior tenants, and the other the claimants to the proprietary right. The result of this summary proceeding was that "most through fear of Fateh Singh, or apprehension of causing an increase of land-revenue by

a disputed title, and others through total ignorance of the consequences which would ensue from not having their names recorded, stood on the side of the inferior tenants and afforded no opposition to Fateh Singh's admission." He thus became proprietor of nearly all the estates usurped by his father and uncle, with the exception of the few from which he was ousted by the special commission in after years. Having thus gained a *quasi*-legal footing in the entire estate, Fateh Singh commenced a systematic career of acquisition which enabled him at his death, in 1839, to leave his son Rao Bahádur Singh one hundred lakhs in specie and vast estates. His first efforts were devoted to crushing the old proprietors. At every settlement and sale he outbid them for their estates, or ran them up to a ruinous price. In such cases he left them the estates, but quietly waited until their involvements became irretrievable; then these unfortunates, when incarcerated for revenue balances or decrees of Court, were eventually obliged to mortgage or sell their estates to the very man who ruined them. Through a clever set of agents he was ever ready to lend money at more favourable rates than the village banker, and pretended it to be a favour to be permitted to supply the funds for marriage festivities. The result may be easily imagined: in no long time he was getting possession of nearly the whole of Púth and Sayána when the settlement under Regulation IX. of 1833 commenced. Sir H. M. Elliot, then, made arrangements by which he trusted to render these transfers less frequent, and by a timely reduction save the property of those that remained independent from the grasp of the Ját usurer. He writes:—"Muhammadpur, Rarúa, Karáoli, and the Pathán villages have received considerable abatement, though I am afraid that in the end the poverty, the debt, and, above all, the indolence of the zamíndárs will cause them to surrender their estates into his possession. The villages, however, under his management are certainly kept in good repair, and the cultivators and tenants have no cause to complain of severe and oppressive treatment. That his authority should be questioned, that he should not be able to retain possession of many, of which he is the avowed proprietor, is sufficiently accounted for by the struggle and reluctance which must always be entertained in resigning a dearly cherished inheritance. So far as this opposition has been carried, it has been found necessary to allow some claimants to continue in possession of the disputed villages, upon the condition of paying a large amount of *malikána* to Rao Fateh Singh, and indeed so long as these alterations, which tend to produce disturbances and affrays, remain unsettled, the assignment of *malikána* in all his villages is worthy of adoption as a temporary expedient. The chief objection that offers itself is the exorbitance of the terms which Fateh Singh himself imposes. He asserts that he would not resign his claim to the malguzári in the disputed villages without an equivalent of 25 per cent. upon the present

Sir H. Elliot on Kuchcheesar.

revenue. The very magnitude of the sum which the claimants would thus have to pay would render all attempt at accommodation of, this nature perfectly futile. For fifteen or twenty per cent. as *malikána*, no doubt, the resident claimants would be happy to enter into a compromise, and Fateh Singh would certainly consult his own interests by accepting this amount, for at present he is represented to have about Rs. 1,50,000 outstanding against his under-tenants. Nevertheless, permanent tranquillity would not be ensured by this arrangement, and nothing could finally settle the relative position of the two parties but a well-grounded decision in the Diwáni Court, or by a commission specially deputed for the purpose of enquiry. Without doubt he has no right whatever to many of these villages which he holds. In some Magni Rám or Ramdhan Singh established their authority by mere force and oppression, and as these were not available under the present rule, their successor has adopted more insidious means, either to acquire new estates or strengthen his hold in those which were disputed. The manner in which Ramdhan Singh obtained the zamíndári of some of the villages held in *mukarari* is of course related by the present generation with the most aggravated colouring ; but even allowing for native credulity and the excitement natural to injured men, it cannot be denied that his right was acquired by the exercise of the most rigorous and cold-blooded barbarity."

Rao Bahádur Singh.

Fateh Singh, as already stated, died in 1839, and his son Rao Bahádur Singh succeeded in adding, 26 villages, comprising taluka Bhatwára in parganah Baran and seven villages in taluka Palwára of parganah Púth, to the already large estate. He had three sons : Lachhman Singh, who died during his father's lifetime, Guláb Singh, and an illegitimate son by a Rajpút woman. Rao Bahádur expressed his intention of leaving his estates equally to his two sons, and this led to constant quarrels between him and Guláb Singh, who resented the intrusion of his illegitimate brother. Rao Bahádur was foully murdered in his own house in 1847, it is believed, at the instigation of his son Guláb Singh. The four assassins actually concerned in the murder were captured, tried and sentenced to capital punishment, but Guláb Singh escaped by means of his wealth and power. Amrao Singh, the illegitimate son, sued for a share in the estate, but his suit was dismissed in 1859 by the Sadr Diwáni Adálat. Guláb Singh received estates assessed at Rs. 7,083 for his services during the mutiny. He died in 1859 and was succeeded by his widow, Jaswant Kunwar, to whom he had given permission to adopt a son. She died without making the adoption, and was succeeded by Bhúp Kunwar, her daughter. Bhúp Kunwar died without issue in 1861, and was succeeded by her husband Khushál Singh, nephew and adopted son of the late rebel Raja Náhar Singh of Ballabhgarh. Amrao Singh again pressed his claim in the courts, with the same results, and

a new competitor arose in the shape of Rao Partáp Singh, one of the grandsons of Magni Rám. The matter was then referred to arbitrators in 1868, who awarded five-sixteenths to Magni Rám's grandson Rao Partáp Singh, six-sixteenths to Guláb Singh's illegitimate brother Amrao Singh, and the remainder to Khushál Singh, husband of Bhúp Kunwar, deceased. None of these men have male issue, and Amrao Singh has lately given one of his two daughters in marriage to Khushál Singh. The treasure amassed by Fateh Singh has all been expended in the litigation, and, in addition, the estate, consisting in 1865 of some 270 villages in this district, Meerut, and Moradabad, is heavily encumbered, and must, sooner or later, come into the hands of the money-lenders. A step in this direction has already been made by the institution of suits now being litigated by the remaining descendants of Magni Rám against the whole of the present possessors of the proprietary right. Mr. Forbes, writing in 1868 of the Meerut estate and their management, says:—"He (the Kuchchesar Raja) is the largest proprietor in the parganah (Púth), and the worst without doubt. He is not a good landlord. For some years law suits have been going on between the rival claimants, and, as might be expected, the estate has suffered in consequence. Land has fallen out of cultivation and villages are partly depopulated. Now that the final decree has been given by the civil courts there is little hope of improvement, the present proprietor being indolent and influenced by worthless advisers."

The Gaurs of Shikárpur.

The Gaur Brahmans of Shikárpur are a very old colony, tracing back their settlement to the times of the Pándavas. A *chaurási* of villages around Govindpur Kantain, the old name of Shikárpur, was held by Gaur Brahmans free of revenue until the time of the Dors. During the Ghori invasion the Gaurs were ousted by the Tagas, who murdered the Gaur Chaudhri, but they subsequently recovered their estates, only to be again ousted by Shaikh Mansúr about the middle of the sixteenth century. It is said that the Shaikh had invited the Chaudhri and his relatives to a feast and there barbarously murdered them, and that Nának Chand, son of the murdered Chaudhri, revenged his father by slaying Shaikh Mansur, and received again the lands that the former had usurped. In Akbar's time parganah Shikárpur was given in *jágír* to a number of Sayyids, but when these offended Aurangzeb, the *jágír* was resumed and the management of the *chaurási* was again intrusted to the Gaur Chaudhri. Of the original 84 villages Chaudhri Lachhman Singh now holds 23, and his relatives, of the same stock, hold 22 villages. The ancient possession of the Gaurs in this district is curiously supported by an inscription of the third century noticed hereafter.

Bháls of Khúrja.

The Bhál Rajpúts appear to be a corrupted branch of the great Solankhi clan, probably connected with the Balla lords of Bhál in Saurashtra. They entered this district under their leader

Kírat Singh by permission of Ghayás-ud-dín Tughlik and expelled the Mína Meos. They call themselves descendants of Sárang Deo, a nephew of the Raja of Gújrát, and say that even in the time of Prithiráj they received eight villages in this district for services rendered in the Mahobá war, and again in the wars of Shihab-ud-dín Ghori, Hamír Singh, their leader, obtained the title of Bhála Sultán, or "lord of the lance." Kírat Singh was seventh in descent from Hamír, who was himself fourth in descent from Sárang Deo. The Bháls settled around Bhoti Shahabad, the old head-quarters of parganah Khúrja, and made Arniya the capital of one branch and Kakaur the capital of another. During the reign of Khizr Khán, Khán Chand, the seventh in descent from Kírat Singh, embraced Islám to please Darya Khán Lodi, and to recover one-half the estate from his brother, who claimed the whole. His Musalmán name was Malha Khán. His son Lád Khán, and nephew Narpat Singh, removed to Khúrja in Akbar's reign and received the office of Chaudhri. Kunwar Azam Ali Khán, the head of the Musalmán branch, now owns 44 villages, and Chaudhris Nonidh Singh, Udeya Singh, Lál Singh, and Biji Singh of the Hindu branch own 32½ villages.

Tenures.

The tenures in this district do not differ in their incidents from those in the other districts of the upper Duáb. From Mr. R. Currie's report it appears that there are 1,206 zamíndári estates in the district, 324 pattidári, and 273 bháyachára estates. There are besides these 31½ villages, comprising 34 estates held revenue-free, in all of which sub-settlements have been formed between the actual proprietors and the assignees of the Government revenue :—

Description of grant.	Number of villages.	Nominal revenue.	When and by whom conferred.
		Rs.	
Altamgha ...	11	13,273	Conferred by the Marquis of Hastings on Colonel James Skinner and his heirs for ever. December 6th, 1822.
Ditto ...	4	3,450	On Colonel Robert Skinner and his heirs f r ever. January, 1st, 1819.
Madadmásh ...	5	2,450	By Malhar Rao of Indúr on Sauta Bái and her heirs for ever, before the British occupation.
Ditto ...	1	5,154	To Rao Fateh Singh and his heirs for ever by the Governor-General. May 10th, 1816.
Religious ...	2	1,390	By the Peshwa and Sháh Alam respectively for the support of a temple and a mosque.
Madadmásh ...	2	1,335	By Sháh Alam, in 1190 Hijri, on Abdúl Azíz.
For two lives ...	1	1,355	On Chaudhris Ratan Singh and Gopal Singh, May 5th, 1861, for loyalty during the mutiny.
Madadmásh ...	5½	4,450	Conferred at various times by different rulers on different persons in perpetuity.
Total ...	31½	32,867	

Alienations.

During the years 1839 to 1859 the alienations of land are shown below. Baniyas and Mahájans were not the principal purchasers, who appear to have been the old established zamíndárs in the neighbourhood, on whom also most of the confiscated villages were conferred.

Modes and extent of alienations of land during 1839-1859.

Parganah.	*Alienation by private arrangements.*			*Alienation by decree of Court.*			*Total.*		*Still held by original proprietors.*		*Confiscated for rebellion.*	
	Entire village.	Portion of village.	Total.	Entire village.	Portions.	Total.	Entire village.	Portions	Entire village.	Portions.	Entire village.	Portions.
Agauta	3	12	15	...	3	3	3	15	50	15	21	2
Baran	46	37	83	1	24	25	47	61	26	48	21	8
Shikárpur	13	19	32	9	6	15	22	25	35	25	2	...
Sayána	5	13	18	...	14	14	5	27	52	19	7	...
Anúpshahr	2	7	9	11	6	17	13	13	78	10	5	1
Ahár	3	3	6	2	1	3	5	4	31	19	81	15
Dibái	13	32	45	...	9	9	13	41	95	39	...	3
Pahásu	26	23	49	5	7	12	31	30	44	19	5	5
Khúrja	26	78	104	7	52	59	33	130	52	73	1	1
Jewar	4	35	39	2	22	24	6	57	31	55	...	...
Sikandarabad ...	11	30	41	1	34	35	12	64	66	46	13	18
Dankaur	18	27	45	2	3	5	20	30	54	39	1	9
Dádri	12	25	37	13	37	50	25	62	85	60	4	4
Total ...	182	341	523	53	218	271	235	559	698	477	161	66

The official returns for the years 1860-61 to 1872-73 are given below. There are no materials from which the caste or occupation of either buyer or seller can be determined :—

Year.	Under orders of Court.				By private transfer.				
	Sale.		Number of other cases.	Total number of cases.	*Sale.*		Succession number of cases.	Mortgage number of cases.	Total number of cases.
	Number of cases.	Aggregate revenue of property transferred.			Number of cases.	Aggregate revenue of property transferred.			
1860-61 ...	31	16,358	88	119	166	66,892	712	133	1,011
1861-62 ...	30	12,699	38	68	86	23,118	824	81	991
1862-63 ...	51	18,538	26	77	60	15,040	875	52	987
1863-64 ...	49	33,556	39	88	137	55,781	273	309	719
1864-65 ...	49	52,359	69	118	125	88,981	150	177	452
1865-66 ...	70	30,187	70	140	160	19,519	427	235	822
1866-67 ...	53	28,335	98	151	131	1,78,686	704	220	1,055
1867-68 ...	49	21,331	58	107	169	3,12,214	653	235	1,057
1868-69 ...	44	18,775	86	130	192	60,427	616	343	1,151
1869-70 ...	38	38,755	65	103	134	1,46,355	672	248	1,054
1870-71 ...	51	25,692 Price	49	100	181	1,09,342 Price	837	209	1,227
1871-72 ...	76	91,091	145	201	159	1,17,749	1,016	282	1,457
1872-73 ...	97	87,911	133	230	152	1,17,882	1,260	328	1,740

The alienations by private transfer far exceed those by order of the courts, and in this district it would appear that the "allegations of widespread ruin and misery brought among the people by the procedure of the civil courts" are not maintained. From 1839 to 1859 transfers of entire villages are in the proportion only of 14·75 per cent. to the total number of villages in the district, and these, as before mentioned, have passed chiefly into the hands of powerful and wealthy landlords, residents in the district. It should be noted here, moreover, that the alienation of 11 villages in parganah Anúpshahr in the statement for 1839-59 is fictitious. Mustafa Khán, to avoid losing his property on account of debt, made his son, then a child, sue him for execution of a deed of gift of this property, and the suit was decreed. Though the fraudulent character of the transaction was well known, on the confiscation of Mustafa Khán's property for rebellion, the deed was upheld and the estate was released to his son. The same remarks apply to one of the Ahár villages. The following statement shows the number of estates upon the revenue-roll of the district, with the total land-revenue paid and the number of registered proprietors paying revenue to Government. 1857-58 is the first year of which the records remain :—

Year.	Number of estates.	Number of registered proprietors or co-parceners.	Total land-revenue paid.	Average land-revenue paid by each estate.	Average land-revenue paid by each proprietor or co-parcener.
			Rs. a. p.	Rs. a p	Rs. a. p.
1857-58	1,663	2,602	10,70,428 0 0	643 10 9	311 6 2
1860-61	1,704	2,585	11,33,518 0 0	665 3 4	434 0 0
1870-71	1,893	2,645	13,75,373 0 0	726 8 11	519 15 10

Cultivators.

The distribution of the cultivated area amongst the three descriptions of cultivators is shown below. The proprietary cultivators are chiefly to be found in large numbers in parganahs Agauta, Khúrja, Jewar, Dankaur, Dádri, and Sikandarabad. The hereditary cultivators, or those who have rights of occupancy, are most numerous in parganahs Shikárpur, Sayána, Anúpshahr, and Ahár, while tenants-at-will abound everywhere, but are proportionately more numerous in Baran, Dibái, Pahásu, and Khúrja.

Statement showing number and classification of cultivating holdings in each parganah of the district in 1865.

Parganah.	*Proprietary cultivators.*			*Hereditary cultivators.*			*Tenants-at-will.*			Average of total holdings.
	Number of holdings.	Cultivated area in acres.	Average per holding in acres.	Separate holdings.	Cultivated area in acres.	Average holding in acres.	Separate holdings.	Cultivated area in acres.	Average holding in acres.	
Anúpshahr ...	93	1,329	14·29	2,669	29,851	11·18	3,556	22,901	6·44	8·55
Ahár ...	325	3,561	10·96	2,748	30,274	11·01	3,544	24,952	7·04	8·88
Dibái ...	791	8,193	10·35	3,136	29,593	9·43	6,601	42,465	6·43	7·62
Khúrja ...	994	19,328	19·44	1,030	12,313	11·95	4,644	49,471	10·65	12·16
Pahásu ...	287	6,013	20·95	725	8,286	11·42	4,618	40,164	8·69	9·67
Jewar ...	1,421	21,400	15·06	1,251	13,556	10·83	3,227	22,340	6·92	9·71
Dankaur ...	1,694	19,422	11·46	1,374	13,296	9·67	3,624	24,385	6·72	8·53
Dádri ...	3,290	34,206	10·39	3,472	23,143	6·66	5,542	32,383	5·84	7·29
Sikandarabad...	2,243	22,072	9·84	1,369	11,503	8·04	5,674	33,706	5 94	7·24
Agauta ...	1,532	11,881	7·73	871	6,184	7·09	3,832	28,378	7·40	7·44
Baran ...	544	6,704	12 32	683	6,656	9·74	5,173	44,457	8·59	9·03
Shikárpur ...	414	5,022	12·13	1,295	11,292	8·71	2,828	19,924	7·05	7·98
Sayána ...	578	7,410	12·82	2,094	24,715	11·80	3,713	26,937	7·25	9·25
Total ...	14,206	166,541	11·72	22,717	220,662	9·71	56,576	412,463	7·29	8·55

The average rent paid by hereditary cultivators is Rs. 30 per annum, and by tenants-at-will is Rs. 23, and the total number of holdings is 93,499 comprising 799,666 acres. The best cultivators in the district are the Lodhas, Játs, and Jhojhas, and next to them are the Tagas and Ahírs. The women of the first three assist the men in their agricultural pursuits. The worst cultivators are the Gújars and Mewátis, but the first mentioned are daily improving. The rise in the price of produce for the last few years has encouraged cultivators to enlarge the extent of their holdings, and has also induced numbers of the urban population to turn to agricultural pursuits. The competition for land is consequently very great, and there are at least ten in every hundred cultivators who cannot get land enough to till to supply their daily wants: this, too, notwithstanding the vast increase in the cultivated area. During the last ten years the condition of the cultivating classes has so much improved

that now thirteen acres is considered a first-class-holding, requiring two pair of bullocks to cultivate it. A two-bullock plough can ordinarily cultivate about eight acres, which would be a middle-sized holding. Two joint tenants *(sáji)* having one bullock are considered poor. Five or six acres of good land near a town would yield a return of Rs. 8 a month, but far away much less. The condition of the cultivators in this district is proverbially good: few are in debt, and those that are in debt have only themselves to blame. The implements and cattle required for from six to eight acres cost about Rs. 100.

Rents.

Rents in cash prevail to a certain extent in every parganah in the district, either in the shape of rates on the various conventional denominations of soil, or upon some of them, or on the natural divisions of soil, or sometimes a summary rate per bígha all round, or else a lump sum from which an average rate could be obtained. Many of the hereditary cultivators have a prescriptive right to a proportionately lower rate of rent than the general cultivating community. These rights have been acquired in various ways at different times, and are known and acknowledged by both landlord and tenant. The most common prescriptive rate for lands paying rent in kind is one-third of the produce *(tihára)*. The acknowledged common rent in kind is one-half of the produce *(nisfi* or *adh-i-adh)*, or its equivalent in money. This is more especially paid in grain, a liberal allowance being made for all other products grown on the same land beside the principal crop. Under the system of division of crops *(kan, batát)* the actual outturn is divided, but this is seldom done; the plan is usually to hold an appraisement *(kút)* of the standing crop, and the landlord takes his share in kind, or its equivalent in money, according to the current market price, either one-half two-fifths *(ba-kund, panch-do)*, one-third, or whatever it may be.

For other than grain crops, such as indigo, sugarcane, cotton, tobacco and vegetables, there are what are called *zabti* rates, which are charged not upon the value of the crop but upon the area in which the crop is grown. There are usually two or three rates; sugarcane is the most valuable and pays highest; then comes tobacco, cotton, and indigo, and then vegetables generally. These rates do not change according to the season or the fluctuations of the market, so that the cultivator has all the advantages of a good season on the tacit understanding that he expends more labour, time and money on the production of these crops than he does on the grain crops. There are 63,086 holdings in the district where the tenants pay in money, and 16,207 where payments are made in kind.

Rents.

The average rent paid in each parganah for each class of land is shown in the following table. The rates given must vary according to the quality and position of the soil:—

Statement showing rent of different kinds of land in each parganah.

Parganah.	Bárah per acre.		Outlying lands per acre.		Khádir per acre.	
	Irrigated.	Unirrigated.	Irrigated.	Unirrigated.	Two crops.	One crop.
	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.
Anúpshahr	10 0	...	3 10	1 12	7 8	3 0
Ahár	10 0	7 0	4 0	2 0	8 0	3 0
Dibái	11 0	7 0	4 0	2 0	9 4	3 12
Agauta	9 10	...	4 2	2 0	...	...
Baran	9 8	...	4 4	2 0	...	...
Sayána ... 1st Circle ...	10 8	4 8	4 8	2 0	...	...
Sayána ... 2nd do. ...	11 0	5 0	5 0	2 4	...	...
Sayána ... 3rd do. ...	12 0	5 0	5 4	2 8	...	...
Shikárpur	12 0	...	4 0	2 0	...	...
Pahásu	11 0	...	4 0	2 0	...	...
Jewar ... Bángar ...	11 0	6 0	3 12	2 0	...	...
Jewar ... Khádir ...	11 0	5 0	4 0	2 4	...	...
Khúrja	12 0	6 0	3 12	2 0	...	...
Dádri	8 0	4 0	3 8	1 12	5 8	2 8
Dankaur ... Bángar ...	8 0	4 0	3 10	2 0	...	...
Dankaur ... Khádir ...	8 0	4 0	...	...	5 8	2 8
Sikandarabad	9 0	4 0	3 12	2 0	...	...

Act X. of 1859 is said to have caused a general enhancement of rent all round. There have been 548 regular suits by landlords for enhancement from the passing of the Act to the end of 1871, nearly all of which have been successful, while on the other hand the suits for abatement of rent have been practically absent.

Weights and measures.

The measures of time and capacity in use in this district do not differ from those ordinarily in use throughout these Provinces. The standard bígha is the same as the canal bígha, and contains 3,025 square yards, equal to five-eighths of a statute acre. Each bígha is 0·5062 of an acre, and 1·9753 bíghas form one acre. The bígha is measured by a chain of 55 yards: this is sometimes called a chain of 60 yards, but the yards used contain only 33 inches each, and are known as Alamgíri yards. The bígha contains twenty biswas, thirty-two of which form an acre. The following note made in 1803 is interesting :—

"The ser in use in the Meerut and Bulandshahr Divisions is 84 sonats, the weights being ascertained by rupees that have been in circulation. This ser weighs 2 lbs. 1 oz. 15 drs. ; the maund of 40 sers is therefore 84lbs. 13½ oz., or 3,405½ sikka weight. The ser in use at Saháranpur, Aligarh, and some parts of Muzaffarnagar is 90 rupees, weighing 2 lbs. 4 oz. 5½ drs., and the maund 90 lbs. 14½ oz., or 3,541½ sikka weight ; and this is the ser in use in the town of Anúpshahr. But it will generally be found that the Baniya's weights are all

short several rupees per ser, which, with their proficiency in humouring the scales, makes the retail trade so profitable to them."

Manufactures. Trade.

There are no manufactures in the districts deserving of particular notice. Fine *pagrís* or turbans are made at Sikandarabad, and Shikárpur turns out good shoes. Municipalities have been established at Khúrja, Bulandshahr, Anúpshahr, and Sikandarabad, the octroi returns of which are given under their respective heads hereafter. The principal exports of the district are safflower and indigo for dyeing, the former to Jaipur and Jodhpur and the latter to Mirzapur and Calcutta; also of wheat, gram, and barley according to the demand in any direction. About 50,000 maunds of cleaned cotton are annually exported, and 20,000 maunds kept for local consumption. Three pounds per head is the local average consumption of clean cotton, of which one-third is foreign cloth. There has always been a considerable trade in wool down the Ganges from Anúpshahr and other places to Farukhabad and Mirzapur, and to a less degree in grain and cotton, and up the river in country cloth. *Gúr* and sugar are imported from Rohilkhand in exchange for *jcár* and *bájra* which finds its way across the Anúpshahr ghât to Chandausi in the Moradabad district, or up the metalled road to and through Dehli, or across the country roads by the Makanpur ghât in Dankaur to the Gúrgaon and Dehli districts, in return for salt. There is also a considerable traffic of a similar description over the Ganges at Rámghat. Rice for local consumption is imported from Pílibhít and Moradabad. Oil-seeds, cotton, and pulses are sent to Cawnpore or Mirzapur.

Fairs.

There are no large commercial fairs, but there are several religious assemblies at which a considerable trade is carried on in English and country cloths, metal utensils, sweetmeats and the like. On the last day of the month of Kárttik and on the days of the conjunction of certain planets, as well as on Mondays falling on the last lunar days, a large number of pilgrims assemble at Rámghát and Anúpshahr. On the *Dasáhra* similar crowds assemble at Karanbás and Ahár. About 100,000 people from the western districts as far as Bikanír and Múltán assemble at Anúpshahr during the Kárttik fair, which lasts about three or four days, and goods worth a lakh of rupees are sold. The Rámghát fair is attended by about 60,000 people in Kárttik, but is not of much commercial importance. The Ahár and Karanbás fairs attract from 10 to 15,000 pilgrims, mostly from the adjacent villages. The Belon fair, held in honour of Bela Devi, lasts a fortnight in Kuár and Chait, and is well attended by the people of the adjacent villages.

At Pacheta, about six miles west of Bulandshahr, a fair is held in honour of an Ahár saint, the patron of the Lodhas and Chamárs, whose women assemble here on two days, the last of Phálgan and the first of Chait, and offer up

petitions against barrenness and in favour of those who are afflicted with lunacy. The attendance is about 10 to 15,000, and the offerings consist of calves, which are appropriated by the attendant priests. Búrha Bábu at Muhána in pargánah Sikandarabad is worshipped on the seventeenth day of Baisákh, Bhádon, and Mágh, as the patron of women and children and the healer of skin diseases. On the eighth of Chait, the goddess of small-pox, Sítla Devi, is worshipped at Mawai near Khúrja. On the fifth of the month of Madár a religious assembly meets at Shikárpur on their way to the Makanpur fair in the Cawnpore district. Sweetmeats and toys are the principal articles exposed for sale at these minor meetings.

Interest.

The rate of interest charged varies with the character and presumed property of the borrower. In small transactions it is as low as nine per cent.; in large transactions with mortgage of moveable property six to twelve per cent.; with mortgage of houses and lands, twelve to eighteen per cent., and by village usurers for agricultural advances twenty-four to thirty-six per cent. Six per cent. would be considered a fair return for investments in land.

Wages and prices.

The wages of unskilled and skilled labourers have nearly doubled since 1850, *pari passu* with the increase in the price of grain. Unskilled labourers comprise about twenty per cent. of the whole agricultural population, and belong principally to the Chamár, Gararíya, Kumhár, and Kahár castes. They are ordinarily paid in grain to the value of about two annas a day, but at reaping and weeding seasons the wages rise to four annas; women usually get two-thirds of a man's wages, and boys one-half. The wages of skilled lal ourers have similarly increased. The following table gives the highest and lowest wages per mensem obtainable by the principal trades in three years during the last decade :—

	1858.		1863.		1867.			1858.		1863.		1867.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.		Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Bakers ...	10	5	10	6	15	6½	Herdsmen ...	6	3	7	3	6	4
Boatmen ...	6	4	6	4	7	4	Labourers ...	5	2	6	2½	6	3
Blacksmiths ...	12	5	15	5	15	6	Masons ...	8	5	15	6	15	8
Carpenters ...	10	5	15	5	15	6	Potters ...	8	2	10	3	12	4
Coolies ...	4	2	6	3	6	4	Shoemakers ...	10	4	12	4	15	6
Corn-grinders ...	4	2	4	2	5	2½	Stone-cutters ...	15	8	15	8	20	8
Cotton-cleaners,	10	4	15	4	12	6	Tailors ...	8	5	10	6	12	6
Farriers ...	15	4	15	4	15	6	Weavers ...	10	6	15	6	15	6
Goldsmiths ...	10	6	15	7	15	8	Well-sinkers ...	12	3	12	4	12	4

Goldsmiths are usually paid for making gold ornaments at from half to one rupee per tola worked, and for silver ornaments from one to four annas. For daily labour brick-layers and carpenters usually get four annas a day.

The following table gives the prices of agricultural produce and provisions from 1858 to 1867. Besides the articles mentioned in the table, the average amount procurable for a rupee, in sers, of Sultánpur salt is 8½; Sámbhar salt, 5½; *ghí*, 2; saltpetre, 24; copper articles, 1; iron utensils, 2¼; brass, 1⅛; lead, 5; tobacco, 5; and flax string, 6¼. Country cloth *(dhotar)* sells at 1½ anna per yard; *gárha* at 4 annas. First-class hides fetch four rupees, second-class hides three rupees. Gold fetches 16 rupees a tola, and silver Re. 1-1-4.

Year.	Wheat, white.		Barley.		Gram.		Bájra.		Jodr.		Peas.		Mustard seeds.		Arhar.		Másh.		Rice, 1st sort.		Rice, 2nd sort.		Sugar, white.		Gur.		Safflower.		Oil.		Cotton.	
	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.
1858 ...	34	6	49	6	44	12	37	8	42	4	46	8	27	8	52	0	10	6	10	0	15	4	3	12	16	14	3	5	8	11	3	8
1859 ...	25	4	44	0	39	4	32	6	35	4	47	8	22	12	40	0	30	4	7	12	12	12	3	8	14	12	2	14	11	3	4	0
1860 ...	13	11	18	10	16	8	14	8	14	12	18	12	14	8	19	4	12	2	7	10	11	4	3	6	11	0	2	8½	5	10	4	0
1861 ...	15	6	22	4	14	12	27	0	25	10	23	0	14	14	21	12	16	4	8	0	10	12	4	0	9	4	2	10	6	4	3	13
1862 ...	27	7	36	9	31	2½	37	0	38	0	36	0	16	2	34	12	29	12	10	0	13	0	3	6	11	4	2	9½	4	11½	3	1½
1863 ...	25	8	40	1	33	4	29	13	31	14	33	8	15	8	36	5	28	14	10	3	14	0	3	7½	14	1½	2	11	5	10½	1	9
1864 ...	22	4½	32	8	27	14	27	7	28	12	33	4	17	12	33	4	22	8	9	8	11	12	3	12	11	15	2	13	6	9	2	2
1865 ...	19	13	28	0	26	1	25	15	28	1	31	12	24	14	28	10	19	11	10	3	12	12	3	14	15	7	2	10½	8	3	2	14½
1866 ...	19	6	29	14½	24	12	26	13	28	3	32	4	25	12	26	3	21	11	7	1	10	8	3	15	14	8	2	8	8	14	2	11
1867 ...	24	15	26	9½	25	11	29	15	33	6	34	0	19	0	27	0	24	11	7	15½	11	12	3	3½	10	6	2	0	6	6	3	4

Revenue and expenditure.

The following statement shows the revenue and expenditure of the district for 1860-61 and 1870-71. The records of previous years were destroyed during the mutiny:—

Receipts.	1860-61.	1870-71.	Expenditure.	1860-61.	1870-71.
	Rs.	Rs.		Rs.	Rs.
Land-revenue ...	10,98,668	12,41,210	Revenue and settlement charges	99,502	...
Excise	22,239	37,069	Excise charges ...	4,333	1,620
Stamps	34,282	70,374	Commission, &c., on stamps,	1,109	51,405
Income-tax	33,267	85,048	Income-tax charges ...	1,785	...
Post-office	8,668	12,613	Post-office charges ...	135	10,393
Customs remittances ...	...	3,462	Pensions	9,016	8,906
Canals	52,292	2,48,400	Canal charges ...	1 50,026	1,60,838
Sale of confiscated property.	2,50,946	2,28,825	Police	1,19,386	...
Judicial receipts ...	11,440	...	Schools	2,216	...
Ditto deposits ...	50,135	5,157	Repayment of judicial deposits.	27,655	8,088
Revenue ditto ...	6,04,893	72,898	Revenue deposits, ...	4,52,886	69,207
Law and justice	..	70,211	Judicial charges, general	48,859	...
Civil court deposits ...	7,738	23,869	Contingent charges ...	9,364	1,576
Local funds	25,946	...	Local fund charges ...	86,536	2,59,821
Local cesses	...	3,83,815	Remittances under schedule XVIII.	...	1,64,636
Public works remittances,	...	18,231	Personal ledger ...	...	32,264
Estates under direct management.	9,815	3,291	Pay of officers and the like.	...	2,31,852
Profit and loss ...	12,677	...	Profit and loss ...	58,803	...
Total ...	23,23,007	25,04,472	Total ...	10,21,622	10,04,635

Income-tax.

The actual assessment of the income of the district at six pies in the rupee calculated upon profits exceeding Rs. 500 for the purposes of the income-tax of 1870 during 1870-71 was Rs. 87,387. There were 1,349 incomes between Rs. 500 and Rs. 750 per annum; 306 between Rs. 750 and Rs. 1,000; 277 between Rs. 1,000 and Rs. 1,500; 113 between Rs. 1,500 and Rs. 2,000; 202 between Rs. 2,000 and Rs. 10,000, and 18 between Rs. 10,000 and Rs. 1,00,000; total persons assessed were 2,265. The tax and its incidence varied, in each year, with the Act under which it was imposed.

Excise.

The following table shows the receipts and charges on account of excise for a series of years in the Bulandshahr district:—

Year.	License fees for vend of spirits.	Duty on spirits.	Opium.	Intoxicating drugs.	Fines, &c.	Gross charges.	Net receipts.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1862-63	408	5,534	9,135	1,939	...	447	16,569
1863-64	1,297	5,936	5,123	1,966	...	901	13,421
1864-65	2,515	5,310	11,280	2,408	2	7,417	14,098
1865-66	4,551	4,960	14,224	2,713	12	9,688	16,772
1866-67	5,705	5,367	16,592	2,864	159	10,991	19,696
1867-68	4,943	4,486	21,504	3,335	68	13,647	20,689
1868-69	5,441	4,058	22,080	3,353	189	14,395	20,726
1869-70	405	4,319	21,920	3,559	5	13,986	16,222
1870-71	3,126	7,065	25,920	3,353	25	15,854	23,635
1871-72	3,232	6,965	26,880	2,473	14	15,879	23,685

The sale of opium has increased very much of late years, and in discussing the causes of this great increase Kunwar Lachhman Singh writes:—"that since the numerous water-channels connected with the Ganges Canal have been opened the atmosphere has become humid, and opium being the best remedy for diseases caused by humidity in native practice, the use of the drug has increased. Again, the rules now in force prevent poppy smuggling by more surely and promptly paying informers and more stringent supervision. Prices of native opium, too, have rapidly equalled that of Government opium." He calculates the number of opium-smokers in the district at 4,208, or one in every 200. His suggestion as to the humidity of the atmosphere being a predisposing cause to indulgence in the drug is curiously borne out by the facts recently made known regarding the inhabitants of Lincolnshire in England.

Stamp.

Stamp duties are now collected under the General Stamp Act (XVIII. of 1869) and under the Court Fees' Act. The following statement shows the revenue and charges under this head for a series of years:—

Year.	Adhesive stamps and hundis.	Blue-and-black document stamps.	Court fees.	Duties and penalties realised.	Total receipts.	Gross charges.	Net receipts.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1862-63 ...	3,067	28,277	...	88	31,432	1,702	29,730
1863-64 ...	3,515	32,596	...	102	36,213	2,143	34,070
1864-65 ...	1,606	36,292	...	118	38,216	2,330	35,886
1865-66 ...	2,207	36,564	...	126	38,897	2,629	36,268
1866-67 ...	3,479	36,243	...	3,973	43,695	2,806	40,889
1867-68 ...	2,064	48,622	...	490	51,176	3,574	47,602
1868-69 ...	2,760	52,592	...	55	55,407	4,088	51,319
1869-70 ...	2,236	61,498	...	135	63,869	5,915	57,954
1870-71 ...	2,468	23,129	44,033	245	69,875	4,628	65,247
1871-72 ...	1,907	19,249	40,511	171	61,858	2,078	59,760
1872-73 ...	1,670	22,211	46,251	6	70,138	1,813	68,325

The present scale of stamp duty on plaints is 7½ per cent.—far too high a sum when added on to the other charges of summonses and pleaders' fees.

Registration.

In 1873-74 there were 6,022 documents registered under the provisions of the Registration Act VIII. of 1871, on which fees to the amount of Rs. 12,232 were collected. The expense of establishment, &c., during the same period amounted to Rs. 2,796. There were 2,346 registrations in 1871-72 affecting immovable property in which the registration was compulsory under Section 17 of Act VIII. of 1871, and 1,257 in which the registration was optional. The other registrations effected refer to movable property, wills, &c., and the total aggregate value of all the documents registered amounted to Rs. 16,24,694. The statistics for subsequent years are included under the Meerut district.

Canal revenue.

The following statement shows the receipts and charges on account of canals for a series of years:—

Year.	Collection.	*Payment.*				Percentage or payment to collections.
		Patwaris' fees.	Establishment.	Contingencies.	Total.	
	Rs.	Rs.	Rs.	Rs.	Rs.	
1866-67 ...	1,85,972	...	1,176	...	1,176	0·63
1867-68 ...	1,72,686	...	1,104	72	1,176	0 68
1868-69 ...	1,90,342	...	1,352	72	1,424	0·74
1869-70 ...	3,78,510	...	1,697	...	1,697	0·44
1870-71 ...	2,46,218	1,054	2,583	...	3,637	1·46
1871-72 ...	2,51,873	1,714	676	...	2,390	0·96
1872-73 ...	2,24,511	4,082	1,882	...	5,964	2·65

The health of the district does not appear to have suffered in any appreciable degree from the introduction of the canal; the climate perhaps has become a trifle moister, and calculated, consequently, to breed and propagate feverish complaints. Canal collections in this district are not made, as in others, through the lambardárs, but by the tahsíldárs, through the agency of patwáris and chaprásis. There are two chaprásis attached to each tahsíl for this purpose. Those patwáris who assist in measurements are allowed certain fees, but those who merely make collections do so gratis. An immense saving is effected by this system, so that, whereas in other districts the average collection charges amount to 3·75 per cent., in this district they amount to one per cent. less. The Hindús do not regard Ganges Canal water with the same veneration as they do the waters of the holy stream itself, but they still consider it superior to the water of every other river and stream except the Jumna, and hence in holiday time it is customary to see many hundreds bathing at the Ganges Canal ghâts and bridges.

Medical history.

The small-pox mortality during 1872-73 was 7·43 per mille of the inhabitants. There were 12,194 vaccine operations during the same year, of which 9,427 were successful, and the results in 1,296 cases were unknown. Amongst the deaths from all other causes in 1873 there are 12 put down to suicide, 24 to wounds, 144 to accidents, and 47 to snake-bites and the attacks of wild animals. Dr. Hutchinson, writing of the general health of the district in 1872, mentions fever of a malarious type as the great endemic disease of the district; it is due to the evolution of malaria, and is very common in the rains. "Fever of a contagious type is not epidemic, but small-pox and cholera are occasionally epidemic. No appreciable improvement appears, as yet, to have resulted from the introduction of sanitary improvements. The following are the more common indigenous drugs used in this district:—Nitrate of potash *(shora); kath karaunja (Guilandina Bonduc); dhatura (Datura alba); madár (Calotropis gigantea et Hamiltonii); binaula* (cotton seed); *rendi* (castor-bean); *jamálgota (Croton tiglium); káladána (Pharbitis nil),* and *indráyan bislombha* (the colocynth gourd). The native practitioner's system of treatment consists in the administration of a succession of purgatives and keeping patients on a low diet."

Before the mutiny subscriptions were collected for founding a dispensary and deposited in the Government treasury; these were plundered by the rebels, but restored by Government in 1858. In 1861 further subscriptions were collected, and a dispensary, under charge of a Native Doctor, and subsequently a Sub-Assistant Surgeon, was established at Bulandshahr. Other dispensaries were established in 1869 at each of the tahsíli towns of Khúrja, Anúpshahr, and Sikandarabad, under the superintendence of the Civil Surgeon. The average

daily attendance of patients is 141, and the people seem to thoroughly appreciate the advantages accruing from skilful treatment and the use of European medicines. The mortuary returns for some years, showing the causes of the deaths recorded throughout the district, are as follows :—

Year.	Fever.	Small-pox.	Bowel-complaint.	Cholera.	Other causes.	Total.	Percentage of deaths to 1,000 of the population.
1867 ...	4,654	2,356	802	724	1,351	9,887	12·3
1868 ...	5,769	1,339	1,402	116	2,446	11,072	13·8
1869 ...	6,650	6,340	1,317	155	1,513	16,075	20·0
1870 ...	11,464	1,585	...	57	3,638	16,744	20·91
1871 ...	15,941	444	2,213	41	2,364	21,006	26·22
1872 ...	23,208	1,048	2,788	419	2,695	30,158	32·17
1873 ...	19,132	6,967	2,326	43	1,815	30,283	32·30

History.

The present district, in common with Meerut, formed a portion of the great Pándava *ráj* of Hastinápur, and on the removal of the seat of government from Hastinápur to Kosim, local tradition asserts that the district was placed under a governor who had his residence at Ahár. The town of Ahár is no doubt a place of very great antiquity : indeed one legend makes it the veritable Kosim to which Nichakru removed his capital on Hastinápur being cut away by the Ganges ; and another makes it the residence of the Nagar Brahmans who assisted Janamejaya in his great snake-sacrifice. After this event the head-quarters of the governor were transferred to the present site of Baran, which at that time went by the name of Banchhati, or land reclaimed from the forest, and in course of time Raja Parmal, one of the governors, built a fort, traces of which still remain in the ravines close to the town of Bulandshahr and to the north of the present jail. But leaving aside the conjectures of tradition, we have in a recently discovered inscription[1] evidence to show that in the neighbourhood of the Ganges there were numerous communities, and amongst them Gaur Brahmans, as early as the third century of our era. The writing is on copper and was found at Indor, a khera about ten miles

Gupta inscription.

1 It was found by General Cunningham and is on a copper plate $7\frac{8}{10}$ inches by $5\frac{8}{10}$ inches, with the edges slightly arched. The inscription extends to twelve lines, the last three of which are more apart from each other than the rest. *J.* A. S., Ben., XLIII, 363.

from Anúpshahr on the Ganges. It opens with a stanza in praise of the sun-god, and then records the order of the Bráhman zamíndár of the Gora or Gaur *gotra* to the village *teli* or oilman to provide a certain amount of oil for the service of the temple of the sun. Indrapura, the correct form of the modern Indor, is mentioned in the record, of which the following translation has been made by Bábu Rajendralala Mitra :—

"Amen! May he whom Brahmans, in obedience to law, bepraise with the harmony of meditation and the entire devotion of their minds; may he whose end and whose motions upwards and sideways neither the gods nor Asuras can divine; may he whom men overpowered by disease and despondency seek with the utmost earnestness,—may that fountain and creator of light (Bháskara) who pierces the darksome envelope of the earth—be to your protection.

In the year one hundred and forty-six, in the month of Phálguna, the (?) of the thriving and invincible kingdom of his most noble majesty, the supreme sovereign of great kings, the auspicious Skanda Gupta, for the promotion of prosperity in the possession of the owner Sarvanága in Antarvedi (or the Duáb of the Ganges and Yamuna).

Versed in the four Vedas, the highly respected Bráhmana Devavishnu, son of Deva, grandson of Párindana, and great-grandson of Dodika, constant in the adoration of fire, of the family (anvaya) of Gora and the clan (gotra) of Varshagana, within the precincts of Indrapura, provides for the promotion of the fame of his mother, the wherewith all for maintenance of a lamp for the (image of the) lord Savita (the sun), which is established to the east of the hermitage of the two Kshatriya saints Achalavarma and Bhumikantha, and adjoining Indrapura and Mardasyána. It should be the duty of the guild of oilmen inhabiting Indrapura to maintain this grant, and by supplying the oil to the Bráhmans of the temple, to make the merit of this gift reflect on them. On every new moon they should give two *palas* of oil in addition to the daily allowance, and this (should be done) as long as the sun and the moon shall last. He will be a vile murderer of cattle, of spiritual instructors, and of Bráhmans, who will venture to set aside this ordinance; enveloped by the five heinous sins and all minor sins such a wretch will drop to the nether regions. Finished."

Further references to Skanda Gupta.

The most important part of the above record is the date, which is placed in the 146th year of the Gupta era during the reign of Skanda Gupta. For reasons to be detailed in the volume relating to the Farukhabad district, there can be little doubt but that the initial era of their dynastic date is 78 A.D., and that the inscription is therefore sixteen hundred and fifty years old, or, in other words, dates from 224A.D. This is the same Skanda Gupta who is mentioned in the inscription on the *lát* or monolith at Bhítari near Sayyidpur, in the Gházipur district.[1] There we read of his distinguished fame as a warrior and his "clear insight into the profound wisdom of the Tántrikas," and his success against a treacherous minister to whom had been committed his treasure, and who had, for a time, been successful in an attempt to make himself independent of the house of Gupta. We next hear of Skanda Gupta in the Kuhaon pillar inscription, which has been lately re-edited and bears date in the 141st year of the reign of Skanda Gupta, or five years previous to the present one.[2] There can be little doubt from the wording of both the documents that during the lifetime of Skanda Gupta

[1] J. A. S., Ben., VI., 1. [2] *Ibid*, VII., 37 : XXX., 3; VII., 348.

troubles arose, and that these were probably increased by his adoption of the new tenets of the Tántrists, who had just come into power, and who subsequently had such influence not only in India but amongst the Buddhists in Nepál and Tibet. The supremacy of the Gupta line probably ended with Skanda Gupta, for we possess records of only one successor, and he ruled towards Central India. Whilst at the height of their power they must have held possession of the whole of eastern India from Bengal to Kumaun and from Nágpur and Gwaliar to Nepál. Inscriptions belonging to them are found in Magadha, Tirhút, Gorakhpur, Gházipur, Sánchi near Bhilsa, Garhwa near Allahabad, Allahabad, Garhwál, Junágarh in Gujrát, and now near Anúpshahr, and they were undoubtedly the most powerful family that ruled in the Antarbed since the extinction of the family of Asoka. It is strange that no Buddhist remains have, as yet, been discovered in Bulandshahr; that they exist is almost certain, although no place in the district has been mentioned by either of the Buddhist Chinese travellers Fah Hian or Hwen Thsang.

The next name connected with the district is that of Raja Ahibaran of the Tomar tribe, after whom the present town of Bulandshahr was called Baran, a name it is still known by. The name Bulandshahr is merely a Persian translation of the name Unchchanagar, or "high city," given to Baran from its position on the high bank above the Káli river. After Ahibaran came Hardatta, a leader of the Dor Rajpúts, who took possession of Meerut, Koil, and Baran, and built at each place a fort. The ruins known as the *Baldi Kot*, or upper fort, at Bulandshahr are pointed out as the remains of the buildings erected by Hardatta. One of the earliest authentic references in Musalmán histories to this district is connected with Hardatta. The author of the *Tárikh-i-Yamíni* mentions[1] that in 1018-19 A. D. Mahmúd of Ghazni arrived at Baran, the fort of Hardat, who was one of the Ráis of the country. When Hardat heard of the approach of the invader he trembled greatly and feared for his life. "So he reflected that his safety would be best secured by conforming to the religion of Islám, since God's sword was drawn from the scabbard and the whip of punishment was uplifted. He came forth, therefore, with ten thousand men, who all proclaimed their anxiety for conversion and their rejection of idols." Baran was there upon restored to Hardatta.

Dors.

One of the immediate consequences of this raid of Mahmúd was a general upheaval of the western tribes and a marked immigration towards the Duáb. Tradition has it that the Mewátis or Meos, about this time, entered the district in large numbers and settled towards the southern borders. Undeterred by the presence of the Dors,

Tradition.

[1] Dowson's Elliot, II., 42.

they pursued their hereditary occupation of thieving and murder, and became such a source of trouble to the Dor chieftain that he was glad to call in others to aid him in restoring order. A large party of Badgújars were on their way from Ráju in Alwar to aid Prithiráj in his war with the Mahobá Chandels. To Raja Partáp Singh, the leader of this party, was intrusted the duty of clearing out the Meos, and after a long and determined struggle he succeeded in ousting them from Pahásu, Dibái, and Anúpshahr. He made Chaundera his head-quarters, and gradually acquired other villages by marriage, purchase or violence. The Badgújars were nominally feudatories of the Dors, and the supreme power remained in the family of Hardatta until the arrival of the Musalmán general Kutb-ud-dín Aibak, who in 1193 A.D. captured Meerut and Baran, and established his own officers in each place as governors. Chandrasen was the Raja of Baran at this time, and he repelled the attacks of the enemy with great vigour until betrayed by his kinsman Ajáyapál Dor and his servant Híra Singh, Brahman, the fort was taken. Chandrasen perished in the assault, but not before he had killed with an arrow Khwájah Lál Ali, whose dargáh still exists to the east of the Balái Kot to the present day. The traitor Ajáyapál was rewarded with the office of Chaudhri of Baran, and on his conversion to Islám received the title of Malik Muhammad Daráz Kad. His descendants are still proprietors of portions of the township of Baran, and profess to have a document in their possession conferring the right to the Chaudhriship upon them.[1] The governorship was bestowed upon one Kázi Núr-ud-din Ghaznavi, whose descendants still reside in the town and bear the hereditary honorific title of Kázi. Prithiráj, too, lent his influence against the Dors, and raised a monument to commemorate a victory that he gained over them.[2]

Kutb-ud-dín, 1193 A. D.

The Dors rapidly declined after the conquest, and, now, possess only one entire village in the district. The Gújars date their arrival in the north of the district from the Musalmán conquest; they came from Gújrát in the Panjáb. The fourteenth century is also marked by a general immigration of Rajpút tribes. The Bháls under Kírat Singh invaded the south of the district and expelled the Meos from the villages held by them in parganah Khúrja. These Meos seem to have lived both here and as far south as Etáwa, with their hands against every man, and every man's hands against them. The facility with which the Bháls obtained a footing in the district encouraged others of the restless Rajpút tribes to search for a settlement on the lands of the hapless Meos. Chauháns, Gahlots, Panwárs, Gaurs, Jaiswárs, Jádons, Bargalas, and others, in this manner, parcelled out the Mewáti villages amongst themselves, whilst later on Patháns, Sayyids, and Shaikhs obtained grants in the dis-

[1] Mangal Sen's History of Baran. [2] Trans. R. A. S., I, 133.

trict. The Mewátis are still numerous, but they, now, possess only four entire villages as proprietors. The greater number of the Musalmán inhabitants are descendants of converts made by Aurangzíb from the Badgújar, Gújar, Bhál, Ját, Mewáti, and almost every Hindú clan. As bearing upon this period, an inscription bearing date *Sanvat* 1223 (1166 A. D.) may be noted which was found in the district in 1867. It is engraved on copper, and records a grant of land made by one Ananga, and gives the names of princes of two distinct families, though they are all grouped under the same family name of Rodra. It commences with Chandrika, the fourteenth in descent from the donor, who was chief of the Rodra family then ruling in Kalinga ;[1] the tenth in descent from him was Vikramáditya, who was expelled by his Brahman minister Padmáditya. The latter, under the name Vahupati, founded a new dynasty, and fourth from him came Ananga, the donor of the village mentioned in the grant. The inscription is in modern Sanskrit, and the characters belong to a period immediately succeeding that of the Kutila inscriptions of the tenth century.

Musalmán historians.

Turning to the Musalmán historians, we find from the *Tabakát-i-Násiri* that Altamsh (Iltitmish) was, for a time, the governor of Baran and its dependencies,[2] and amongst the few other notices of the district that we possess the following may be mentioned. In 1295 A.D., Alá-ud-dín, after the murder of his uncle Jalál-ud-dín, proceeded from Karra to Baran, which, for some time, became his head-quarters.[3] The district then came under a succession of military governors, few of whom had any sympathy with the people.[4] Under Balban, the fief of Baran was held by Málik Túzaki, who felt the displeasure of Kai-kubád shortly afterwards and was got rid of by strategem. Zia-ud-dín, the author of the *Tárikh-i-Fíruz Sháhi*, was a native of Baran, and his father, Muyid-ul-mulk, was deputy and Khwájah of Baran in 1296 A.D., having evidently sided against the Jaláli party at the great meeting of nobles held here by Alá-ud-dín in the previous year. Baran was one of the cantonments of the imperial army about this time, and it was here and at Koil that they awaited the attacks of the Mughals under Targhi. The ámils of Baran suffered, equally with those in the rest of the Duáb, at the hands of Muhammad Tughlak. Many of them suffered death, and all through the Duáb the tyrant's cruelties caused a famine quite as severe as one due to the failure of the periodical rains. Fíruz Tughlak did his utmost to remedy the evils caused by his uncle, and left a memorial of himself in Fíruzganj at Khúrja in this district. What was done by him was rapidly undone by Timur, who during his raid into the

[1] Both the date and the name of the country Kalinga are open to doubts owing to the imperfect state of the plate. J. A. S., Ben., XXXVIII, 21. [2] Dowson's Elliot., II., 322. [3] J. A. S., Ben. XXXIX., 7, 8. [4] Dowson's Elliot, III., 128, 159, 161, 190; IV., 35, 36, 42, 52, 82; V., 79.

Duáb in 1398 A.D. took occasion to send foraging parties towards Baran, whither Ikbál Khán and many of the court had fled for protection. Civil commotions followed the departure of the Mughals, and early in 1399 A.D. Nasrat Khán sent a large force under Shahab Khán to attack Ikbál Khán in Baran. The former fell into an ambush laid by the Hindús and perished with his men, and Ikbál Khán fought his way to Dehli. The distress at this time was such that the whole of the Duáb suffered severely. War, pestilence, and famine all combined to reduce the unhappy people to the lowest depths of despair, and in addition there was no government, or only one not worthy of the name. Again in 1407 A.D. Baran was occupied by the troops of the Jaunpur king, Ibráhím Sháh, on his march to Dehli. Having heard tidings of the conquest of Dhár by one of his enemies, Ibráhím returned to Jaunpur and left his follower Marhaba Khán with a small force in the fort of Baran. Shortly afterwards Sultán Mahmúd "marched from Dehli against Baran. Marhaba Khán came forth to meet him and a battle followed, in which the Khán was worsted and driven into the fort. The Sultan's men pursued, and entering the fort, they killed Marhaba Khán." In the campaign against the Rajpúts of Etáwa in 1420 A.D. Baran was one of the halting-places of the royal army, and then, as now, formed one of the principal stages on the road through the Duáb. On the murder of Mubárák Sháh in 1434 A.D. disturbances arose amongst the nobles of his court, and Málik Alláhadád Káká, a Lodi of Sambhal, took possession of Baran on the part of those indisposed to Sarwar-ul-mulk, the murderer of the Sultán. A large force was despatched from Dehli to reduce the rebels. Allah-dád retired to Ahár, and being joined by some of the principal men from the force sent against him, drove his opponents back to Dehli, where they, eventually, were defeated.

Akbar's reign.

Beyond these few stray notices and a visit paid by Bahlol Lodi to Baran, there is little to be gleaned from the Persian historians regarding the early local history of the district. Mere names of governors and accounts of battles give us small information regarding the condition of the people or the economical history of the upper Duáb. In the *Aín-i-Akbari* we have a glimpse of its fiscal history and a general account of Akbar's administration. The following table shows the revenue of each mahál or pargana in Akbar's time expressed in *dáms*, but it must be remembered that very few, if any, of the parganahs of the same name in existence now represent the parganahs of Akbar's days. The changes of boundaries in 1842 and 1855 have so thoroughly altered the areas of each parganah that it would be impossible now to re-construct them. Those bordering on Aligarh and Meerut have only a portion of the villages that once belonged to them, so that any comparison of the present revenue of the whole district, or that of individual parganahs, with the assessments of Akbar's time is

out of the question. The figures are given more as an antiquarian note than as affording any really useful information[1]:—

		Revenue in dams.			Revenue in dams.
1.	Ahár ...	21,06,554	10.	Tilbegampur ...	3 70,374
2.	Pahásu ...	25,02,562	11.	Jewar ...	18,78,375
3.	Khúrja ...	37,03,020	12.	Dankaur ...	10,16,682
4.	Dibái ...	21,67,933	13.	Sikandarabad ...	12,59,199
5.	Malakpur ...	14,46,182	14.	Sentha ...	8,54,191
6.	Thána Farída ...	2,12,750	15.	Sayána ...	20,49,090
7.	Shikárpur ...	19,84,828	16.	Kásna ...	15,22,315
8.	Adah	5,13,081	17.	Shakrpur ...	21,11,996
9.	Baran	39,07,928		Total	2,96,09,013

The changes that have occurred in each parganah have been noticed elsewhere. Bulandshahr, with the other districts of the Duáb, felt the full effects of the disastrous disorganization that reigned throughout the whole of Upper India from 1720 to the British occupation. In the north of the district, Dargáhi Singh, a Gújar of the Bhatti *got*, carved out a principality for himself similar to those acquired by his clansmen, Nain Singh of Bahsúma, in the Meerut district, and Ramdayál of Landhaura, in the Saháranpur district, and the Játs of Bhartpur left a colony behind them at Kuchchesar. Here the Gújars and Játs, as usual, distinguished themselves for their turbulence during times of anarchy, but the local history of this period is so intimately connected with that of Aligarh that it would be mere repetition to mention it here. Baran was then, to all intents and purposes, a mere dependency of Koil, and had really no separate history of its own. Under the Marhattas it was administered from Koil, and with the fall of Koil it came into the hands of the British. Up to 1817 it remained in the Aligarh district, and the present district was not created until 1823-24. The particulars of the changes which took place at various times will be found under the parganah notices, and under the heading "old families" on a previous page.

Gújars of Dádri.

At the conquest one of the most turbulent and powerful of the local magnates was Mádho Rao, the Marhatta jágírdár of Málágarh. He was called upon to surrender and give up his fort by the late Colonel James Skinner, to whom the duty of reducing the malcontent landholders between Koil and Dehli was intrusted. Mádho Rao answered the demand by ordering the Colonel to abandon his post at Sikandarabad, as it lay within the jurisdiction of the Marhatta fort of Málágarh. The result of these messages, which neither would obey, was a pitched battle near Sikandarabad, in which Skinner was victorious, with the loss, however, of 200 men killed and wounded, but, on the other hand, the Marhatta force was almost destroyed. Eventually Madho Rao was glad to come to terms, and delivered up his fort

Marhattas of Málágarh.

[1] Twenty double *dáms* equal one rupee, and the revenue will therefore equal Rs. 14,80,450. See Thomas's Pathan Kings, 464.

on condition of being allowed to march away with all his private property and arms. His son, Rám Rao, was afterwards taken into the British service, and attained to considerable eminence as a leader of the irregular cavalry. Other noted landholders, at this time, were Rao Ajít Singh, the Gújar leader of Dádri; Rao Ramdhan, Ját of Kuchchesar; Dúndi Khán, Lálkháni of Pítampur; and Náhar Ali Khán of Imláni. The history of these men will be found under the Aligarh district and under the notice of their families. From the formation of the district in 1824 to the mutiny in 1857 there is really little worth mentioning in a notice like the present one. The famine of 1838 and the settlements of the land-revenue are the only matters of great importance, and these are fully noticed elsewhere.

The mutiny.

On the breaking out of the mutiny[1] at Meerut in 1857, the Bulandshahr district was held by Mr. Brand Sapte and Messrs. Turnbull, Melville and A. Lyall of the Civil Service. Mr. Sapte, at once, called upon all the principal landholders to aid in furnishing troops to preserve order. His requisition was complied with by Rao Gulább Singh of Kuchchesar, Muhammad Ali Khán of Chhatári, Murad Ali Khán of Pahásu, Abdul Latíf Khán of Khánpur, and Lachhman Singh of Shikárpur. The Játs of Sehra and Sayyidpur and the Musalmáns of Chaundera were offered permanent service on condition of furnishing a troop of mounted men within a given time, whilst Mr. Sapte's assistants made expeditions towards Dádri and Sikandarabad to overawe the turbulent Gújars, who, on hearing of the events at Dehli and Meerut, had commenced to plunder in all directions. The Gújars had, already, burned all the travellers' rest-houses and had destroyed the telegraph. On one occasion the civilians, with the assistance of a detachment of the 9th Native Infantry, succeeded in capturing forty-six Gújars belonging to some of the worst villages, and brought them into the station. Aid was asked for from Bareilly, but fortunately the services of the 8th Irregular cavalry who subsequently mutinied, could not be spared; the Rámpur Nawáb declined to supply the troops asked for from him, another fortunate circumstance, as the Pathán of Rámpur gave but little aid elsewhere; and the Gurkhas of Dehra also failed to arrive. General Hewitt of Meerut, with his usual disinclination to action, refused to allow of the deputation of a few Europeans to carry in the treasure to Meerut, and to add to the general gloom, a letter was received from the Magistrate of Agra (Mr. Drummond) and Major McLeod, of the Engineers, "directing all officers to fall back upon Agra, as the rebels were reported to be in full march on that station, and the fort was considered the only safe place." Not so thought the Bulandshahr garrison, and they resolved to remain at their posts, especially as the detachment of the 9th Native Infantry on duty at Bulandshahr had, hitherto, remained faithful.

[1] From Mr. Sapte's official report on the mutiny.

Mutiny of the 9th N. I.

Early on the morning of the 21st May tidings arrived from Aligarh of the mutiny of the head-quarters of the regiment and the departure of the Europeans for Agra. Mr. Sapte, at once, sent off all the ladies and children to Meerut, leaving the garrison reduced to seven Englishman—Messrs. Sapte, Melville, Turnbull and Lyall of the Civil Service, Lieutenant Ross of the 9th Native Infantry, and Messrs. Knight, father and son. Towards the evening of the 21st May this party was informed of an intended attack by the Gújars, and also heard of the approach of the Aligarh mutineers on their way to Dehli. Upwards of ninety remount horses, sadly needed for the troops, were at this time passing through Bulandshahr to Meerut, under a guard from the 6th and 44th Native Infantry, but General Hewitt refused to receive them, and they still remained at Bulandshahr. Mr. Sapte with Lieutenant Ross attempted to pack up the treasure, and whilst doing so were attacked by a large body of Gújars. The Europeans were obliged to leave the treasure in the hands of the sepoy guard in order to attack the Gújars, whom they charged and dispersed, but in the meantime the guard commenced to help themselves to the treasure, and when the Europeans returned after clearing the streets of the town "they were fired at by the guard as a warning to keep off." They all succeeded in escaping to Meerut except Mr. Knight and his son, who had got separated from their party whilst charging through the streets. The treasure and horses were all lost owing to the refusal of General Hewitt to render any assistance in removing the treasure and his positive prohibition against sending on the horses. Messrs. Ross, Turnbull, and Lyall had induced the treasure guard to accompany them as far as the Grand Trunk Road, but when they arrived there the sepoys told them "to go and join their friends as they intended to do."

Plundering of the civil station.

As the Gújars entered the station they fired each house, commencing with the dák bungalow, and during the four days that the station was without British officers all property, public and private, belonging to Government or Government officers, was carried off or burned. The public offices were gutted and all the records were destroyed: hence it is almost impossible to reconstruct the history of the district from its formation until the mutiny. The people of the town and the neighbouring villages took a very active part in the work of demolition. The absence of the authorities from Bulandshahr and Aligarh left the Agra to Meerut road completely at the mercy of the ill-disposed. Travellers were murdered and plundered, and all communications, except by camel-riders, were stopped. The Gúrkhas of Dehra (Sirmor Battalion) were working their way down by the canal, but were stopped at Dásna in the Meerut district, by the destruction of the locks on the canal, and on their asking for carriage from the General at Meerut their request was negatived. They succeeded in reaching Bulandshahr on the

24th May, and had they been supplied with carriage would have been in time to prevent the outbreak on the 21st and the loss of the treasure and horses. Messrs. Sapte, Lyall, Ross and Tyrwhitt arrived on the morning of the 26th from Meerut, accompanied by a detachment of Craigie's levies consisting of raw recruits, "badly mounted and worse armed, having as little confidence themselves in their horses as we had in the riders, and their subsequent conduct showed what they were worth." With the Gúrkhas, 200 Rámpur Patháns came in from Rohilkhand and were employed in patrolling the roads, but on the 28th they showed mutinous symptoms and thirty of them marched off for Dehli, whilst Major Reid of the Gúrkhas ordered the remainder to leave the station. The Patháns recrossed the Ganges and returned to Rámpur. Chandpur, a village close to the station, which had shown itself active in the plunder of the bungalows was searched, and some property was recovered. A few of the principal ringleaders in the previous disturbance were captured and hanged, and Biláspur, the fort of the Skinners, was visited, but its garrison preferred to remain where they were.

Departure of the Gurkhas.

On the evening of the 28th of May the Gúrkhas marched to join General Wilson's column at Ghaziabad (Gháziuddínnagar). The Gújars of parganahs Dádri and Sikandrabad were no sooner apprised of this movement than on the very next day they attacked the rich and populous town of Sikandarabad, about ten miles from Bulandshahr. "Vast numbers of the inhabitants of both sexes and all ages were brutally illtreated and murdered." The civil authorities were helpless. Only four miles off lay the fort of Walidád Khán, of Málágarh, who had arrived from Dehli on the 26th May with a following of mutineer soldiery and the patent of the *subahdári* of Koil and Baran in his pocket, granted to him by his connection, the ex-king of Dehli, with whom he had been staying. They knew that if they moved out of the station he would be down upon them and cut them off, and thus communication with Agra and Aligarh, the sole object of holding Bulandshahr, would have been impeded. It was no doubt very "distressing not to be able to respond to the repeated calls for assistance." The guard was increased to 75 men from various irregular cavalry regiments, all under the command of Captain Tyrwhitt, whose "sound judgment and firm bearing kept them together in a manner highly creditable to himself," notwithstanding the news daily arrived of fresh regiments, to most of which the men belonged, having mutinied. The Europeans, again, numbered barely seven men, and divided amongst themselves the duties of patrolling. Every sentry was visited, at least once every hour during the night to prevent a surprise by the the enemy or treachery on the part of their own men, and the bridge-of-boats at Anúpshahr was broken down to prevent the passage of the Rohilkhand rebels.

Messrs. Clifford and Young, of the Revenue Survey, joined the garrison on the 1st June, and matters began to look very serious. Reports from the interior of the district showed that order was passing away. Former proprietors now took the opportunity of ousting the present possessors of their estates and in some instances this was effected by force and large bodies of armed men. The principal talukadárs, however, all this time remained quiet. In fact, with the exception of the Málágarh man, no person of consequence then gave the authorities any uneasiness; on the contrary, they all continued to profess extreme loyalty. The continuous stream of mutinous troops up the Grand Trunk Road had of course a very bad effect upon the minds of all, disheartening the well-affected and giving confidence to those who were ill-disposed, whilst the sacking of the town of Sikandarabad being permitted still to go on with impunity led the people to suppose our power had really ceased.

Spread of anarchy.

Aligarh was held by the British for one day and by the rebels the next, but here the authorities were respected as far as Khúrja. Mr. Melville, who had rejoined the station from Meerut, went down to Khúrja and succeeded in bringing away some Rs. 1,500 of treasure. Rumours of an intended attack on the station were of daily occurrence and necessitated much patrolling. On the 10th June all but twenty men of the irregular cavalry deserted and joined a largebody of mutineer cavalry who were then at Khúrja on their way to Dehli, and as these proved to be some of the Oudh Irregulars, who had murdered their officers on the road, the station party thought it advisable to leave Bulandshahr for a time and retire to Galáothi. They had hardly arrived there when news arrived of the occupation of the town by Walidád of Málágarh ostensibly in the name of the British Government. Mr. Sapte resolved to return, and his account of the events that then took place had better be given in his own words. He writes :— " At Captain Tyrwhitt's request I went ahead with Messrs. Lyall and Clifford, and Lieutenant Anderson of the 3rd Europeans, to let the people know we had returned. On entering the station I met Ismaíl Khán, Walidád's headman, who at once came up to me and reported all well. I told him I was going into the city, that our return should at once be known. He accompanied us, and when near the city said he had better go ahead, as there were a number of desperate characters in the city who might oppose us. I saw a large body of men collected at the further end of the street, close to the kotwáli. While Ismaíl Khán went to parley with them, we rode a little way down the street and then pulled up, awaiting his return. Finding he did not come back, I sent Mr. Clifford to Captain Tyrwhitt to let him know how matters stood, and requested him to come on as quickly as he could, while Mr. Lyall, Lieutenant Anderson, and I retraced our steps leisurely. Within a quarter of an hour Captain Tyrwhitt arrived, and on my telling him how the city was occupied, he expressed his determination to drive them out, and

Walidád occupies the district.

giving the word "charge," we went at a gallop towards the city. On our reaching the last turn near the jail, which enabled me to see into the city, we found the rebels had moved up to the entrance, and the moment we came in sight they opened on us from three guns and a heavy musketry fire. Captain Tyrwhitt most gallantly led us within thirty yards of the guns, the first discharge from which disabled and killed three men and horses. Only about 15 men had followed; Craigie's levies fled on the first shot being fired, and we never saw them again. Being entirely unsupported, we were reluctantly compelled to retreat towards the open, where we could have acted better than in the narrow road in which we were, but we were not followed. I should mention here that we had previously sent up a small gun, but as it was drawn by bullocks it could not be brought up in time for the action. We brought it off however with us; Mr. Young, under whose charge it was, displaying much coolness on the occasion. Finding ourselves unmolested we retraced our steps to Galáothi. As we passed Málágarh we found Walidád had sent out a small body of cavalry to oppose our retreat, but these fled on our approach, and, as we pursued them, took shelter in a village close under the walls of Málágarh, from which they opened a fire upon us, but without effect. Thus were we, step by step, driven out of the Bulandshahr district."

Interregnum.

The day after the departure of the Europeans, Walidád expelled the police outpost at Galáothi, whilst Mr. Sapte's party remained at Bábúgarh, near Hápur, in the Meerut district, watching the Rohilkhand rebels. On the 18th of June Walidád's outpost at Galáothi was driven back, but on the 22nd June, owing to the arrival of the Bareilly mutineer brigade, the Europeans had to fall back upon Meerut. The Meerut and Agra road thus fell into the hands of the mutineers, and Málágarh became the resort of all the ill-disposed of the surrounding districts. Walidád occupied Aligarh and Khúrja, and attracted to his standard the Patháns of the Bárah Basti in the Bulandshahr district who had given so many recruits to the generally mutinous irregular cavalry. From its position, only about 900 yards from the road, the fort of Málágarh commanded by its guns (six in number) the entire road. Communication with Agra, even by camel-riders, was effected with extreme difficulty, for so well was the whole line of road and its vicinity watched that scarcely a man could pass without being intercepted, and the penalty of discovery was death. Various expeditions were planned, but from various causes were never undertaken, until Walidád had got such reinforcements, and his followers had increased to such numbers, that he had really become a formidable foe. Reinforced by the Jhánsi brigade he threatened Hápur, and but for the opportune arrival of a relieving force it would have experienced the fate of Sikandarabad. During September a sharp artillery fight with the guns of the Jhánsi brigade took place at Galáothi.

Re-occupation of the district.

On the 25th September[1] Colonel Greathed's flying column set out from Gháziabad and arrived at Bulandshahr on the 28th. The troops encamped within a mile and a half of the town at the place where the road to Málágarh branches off. A picquet of rebel cavalry fell back on the town, which was protected by a battery, whilst the gardens and walls were occupied by the enemy's infantry. Leaving a reserve to protect the baggage and stores at the cross roads, the advanced guard of the British pushed on towards the city, feeling their way as best they could. The reserve was attacked by cavalry and guns in flank, but these were quickly driven off with loss, and in front the right and left columns of attack were soon engaged with the enemy. Their batteries were silenced, and a way having been opened with grape-shot, the cavalry and artillery pressed on through the town, driving the enemy everywhere before them. Three guns and an immense quantity of baggage and ammunition fell into the hands of the victors.

Rebels expelled.

Walidád fled with the greater portion of his followers across the Ganges, leaving a number of guns, stores, and plunder in his fort, which was occupied by a detachment of cavalry. A party of Sappers were for some time employed in mining the fort, and on the 1st of October the mines were exploded in person by the gallant Lieutenant Home, R.E., the hero of the Cashmere gate at Dehli, who lost his life ; a spark from the port-fire accidentally ignited the train, and he was killed by the explosion. On the 3rd of October the column marched to Khúrja, and whilst there Mr. Sapte and Captain Watson visited Jhajhar, as the former gentleman had received intelligence of a Christian girl being concealed in the house of a Musalmán trooper of the rebel 15th Irregular Cavalry. Mr. Sapte writes :— "Though we arrived at the village before daybreak, they were ready for us. A large body of sowars arrived, and many of them in full uniform came out to oppose us. Several were killed in actual fight, and some few taken prisoners with arms in their hands, were tried by drum-head court-martial, and shot on the spot. After a long search we discovered the girl ; she turned out to be the daughter of a Eurasian, a clerk in some Deputy Commissioner's Office in Oudh, whose life, as also that of the father, had been saved by the trooper Khuda Baksh, in gratitude to whom she turned Musalmáni and married him. As she expressed a strong desire to be allowed to remain I did not force her away." Khúrja, said to have been a very hot-bed of disaffection during the mutiny, was spared at the representation of the Collector, who returned to Bulandshahr.

Restoration of order.

On the 4th October Bulandshahr was occupied by a force under Lieutenant-Colonel Farquhar, consisting of the right wing of the 1st Bilúch Battalion; two horse artillery guns, and a body of

[1] Bourchiers' Eight Months, Campaign : London, 1858.

Pathán horse under Major Stokes, and from this date confidence began to be restored. Abdul Latíf Khán, the head of the Patháns of the Bárah Basti, paid up his balances of land-revenue, though he had previously refused to pay one pice. This man was subsequently convicted of aiding the rebels in every way, and was sentenced to transportation for life. His uncle Azím Khán had joined Walí Iád, and was captured by Khushi Rám, the Ját Police Officer of Anúpshahr, whilst trying to escape into Rohilkhand. Azím Khán was tried by court-martial and was sentenced to death. The police-stations were at once re-established, and with the exception of Sáhibdád Khán, of Shikárpur, who had deserted, and Pír Muhammad Khán of Anúpshahr, and Khúrshed Ali, Kotwál of Bulandshahr, whose conduct was somewhat suspicious, the old police officers were reinstated in their posts. The greater part of the rank and file of the police had joined the rebels, and their places were filled by Játs, while a strong force was sent to overawe the Gújars of Dádri and Sikandarabad. On the 17th November the camp moved towards the Ganges, but had only reached Ahár when news arrived of an intended uprising of the Gújars to rescue their brethren who had been captured, but this movement was frustrated by the troops returning by forced marches to Bulandshahr. The jail was then put into a state of defence capable of resisting the attack of any number of Gújars, and the jail garrison was reinforced in men and provisions, so as to admit of the camp being moved without fear of being again recalled. On the 27th the force marched by Sayána to Púth, and thence down the right bank of the Ganges, visiting each ferry *(ghát)*. The whole of the boats were collected at Anúpshahr and intrusted to a body of 200 Játs. Púth, Basai, and Ahár were placed under Rao Guláb Singh of Kuchchesar, and the force proceeded southwards by Karnbás to Rámghát, having secured every boat of which any traces could be found. The rebels did not show themselves on the opposite bank, so the force marched on to Dibái, intending to return to head-quarters, preparatory to beating up the quarters of the Gújars, who still set the police at defiance and refused to pay up any revenue. On reaching Shikárpur intelligence was received of the rebels appearing in force in the Budaun district opposite Rámghát. The camp immediately moved to the Ganges, and on arriving at the ferry the sound of heavy firing was heard, which subsequently proved to be an attack by the rebels on Gannaur, a friendly village some few miles inland. Gannaur was plundered, and the rebels then proceeded to loot the neighbouring villages. The Aheriyas, a numerous tribe, first showed some opposition, but finding themselves unsupported, compromised matters, and finally joined the rebel ranks. They occupy nearly all the villages on the left bank of the Ganges; and it was found necessary to keep a strict watch over all the ferries and fords, as the latter become daily more shallow; but though on several occasions the

rebels attempted to cross in force, they never succeeded. The camp was occupied off and on until the 5th December in patrolling the Ganges parganahs from the Meerut to the Aligarh district.

Expedition towards Eta.

Constant rumours prevailed that Walidád with all his following intended to make an attempt to re-occupy Málágarh, and considerable excitement ensued. On the 5th December the force marched to Dibái, where intelligence awaited them of the arrival of Bakht Khán and the Bareilly brigade at Kásganj in the Eta district, where they murdered the blind old tahsíldár, Chaube Ghansám Dás, and levied a contribution on Soron. The Bulandshahr authorities resolved to make a demonstration towards Eta, and were about to proceed to Atrauli, when information was received that Hurmat Khán, who held the fort of Pindráwal, belonging to one Fahím-ul-nissa (a near relation of the rebel Rahím Ali Khán, son of Násir Ali Khán of Khailiya), was laying in stores for the use of the rebel troops. Hurmat Khán was surrounded by stratagem and his fort was taken, with an immense quantity of supplies evidently collected for warlike purposes. He was also busily engaged in putting his fort into repair and in mounting two guns which had been lent to him by the Collector. From Pindráwal the force marched towards Eta, and co-operating with Colonel Seaton, was present at the action of the Nim Nadi and the operations along the Ganges, and returned to Bulandshahr, after a fortnight's absence, on the 29th December. On the 2nd January news arrived of an attack upon the boat-guard at Anúpshahr, and Mr. Lyall started off with a body of mounted police, but was only in time to see the conclusion of a very smart affair between the rebels and the Játs under Khushi Rám. The Collector had brought together about 187 boats here, and a short way above this place was an easy ford. The rebels brought down two guns below the ghát, so as to rake the boats and the men who guarded them. The Játs returned the fire from two small iron guns, but, in the meantime, a body of horse and foot attempted to cross by the ford. Khushi Rám, in no way daunted, wheeled his men around and gave the rebels two volleys in quick succession, which had the effect of dispersing them for the time. Fortunately Colonel Farquhar thought it right to come to the assistance of the Játs, for on the 17th January, the enemy came down in force with six guns, two of which they planted opposite the centre of the British position and two on each flank. Lieutenant T. P. Smith replied with his two six-pounders so effectually that in three hours he silenced the enemy's battery. The British loss on this occasion was two men wounded and one killed, whilst the enemy lost about fifty men, and had not Colonel Farquhar received the strictest injunctions not to cross the river, the enemy might have been destroyed. This success had the effect of preventing any more attempts to cross the river, and although

Defence of the boats at Bulandshahr.

Rahím Ali came about this time fresh from Bareilly as the rebel subahdár of Budaun, he never succeeded in any attempt against the district.

The Gújars of Dádri fled to the western bank of the Jumna *khádir* after sending in the revenue by Brahmans who had no share in their misdeeds, and before Mr. Sapte left the district (21st April, 1858) nearly sixty pieces of cannon, some of them of large calibre, and many wall-pieces (*jazáils*) were recovered in the district. On leaving the district Mr. Sapte was able to report that it had resumed its wonted quiet. The revenue had been all paid in, serious crime was unknown, and even offences of a slight and trivial nature were of unfrequent occurrence. Several mutineers of the rebel regiments had been brought to justice, and many of those who had taken an active part in the disturbances had been caught and received the reward for their crimes, whilst those who had shown themselves loyal were recommended for special consideration. Mr. Sapte gratefully acknowledges the services rendered by the military officers deputed to the district, and Captain Tyrwhitt, in command of the levies. Messrs. Turnbull, Melville, and Lyall of the Civil Service were present throughout, and were engaged in many expeditions requiring as much military skill as those whose profession it is, could command.

Rewards and punishments.

A summary of the punishments and rewards on account of the events connected with the mutiny in this district will form a fitting pendant to the narrative given above.[1] Besides those mentioned below there were many others who obtained confiscated villages in this district in reward for services rendered in other districts; their names will be found under "families of distinction" on a preceding page.

(1.) Mr. T. Skinner, of Biláspur, obtained confiscated villages assessed at Rs. 6,000 per annum.

(2.) Mahmúd Ali Khán, of Chhatári, obtained villages assessed at Rs. 4,193 per annum and a *khilat* or dress of honour of Rs. 1,000.

(3.) Faiz Ali Khán, of Pahásu, was rewarded with villages assessed at Rs. 4,000 per annum, of which one-fourth the revenue was remitted for life. He also received a *khilat* of Rs. 1,000.

(4.) Imdád Ali Khán, of Pahásu, received villages assessed at Rs. 2,909 per annum.

(5.) Zahúr Ali Khán, of Dharmpur, received villages assessed at Rs. 3,000 per annum.

(6.) Rao Gulab Singh, of Kuchchesar, was rewarded with villages assessed at Rs. 8,000 per annum, with remission of one-fourth of the revenue for his life, and a *khilat* of Rs. 2,000, with the title of Raja Bahádur.

(7.) Chaudhri Lachhman Singh, of Shikárpur, received villages assessed at Rs. 1,09.

[1] From Kunwar Lachhman Singh, of Bulandshahr.

(8.) Rai Durga Parshud received villages assessed at Rs. 1,400 per annum.

(9.) Khushi Rám, the Ját who defended the boats at Anúpshahr, received villages assessed at Rs. 1,202, with remission of one-fourth of the revenue for life, and a *khilat* of Rs. 1,000.

(10.) The heirs of Ratan Singh, a Ját Risáldár of Sehra, received villages assessed at Rs. 2,000 a year; whilst Jhanda Singh, Basti Rám, Shádi Rám, and Naubat Singh, also Játs of Sehra, received lands assessed at Rs. 600 each, and Jhanda Singh, in addition, a *khilat* of Rs. 200.

(11.) The Játs of Bhuthona also received rewards for defending their village and defeating Walidád and the Jhánsi brigade with the capture of three guns.

(12.) Ahmad Sayyid Khán, of Khúrja, obtained villages assessed at Rs. 1,893, with a *khilat* of Rs. 1,000.

(13.) Imdád Ali of Galáothi received a gratuity of Rs. 300.

(14.) Harsarúp, a servant of Government, received a gratuity of Rs. 500.

(15.) The tahsíldárs Jainaráyan Singh and Bishandayál received gratuities of Rs. 1,000 each, and Sayyid Muhammad Shirázi, of Khúrja, one of Rs. 400.

(16.) Farhatullah, a mukhtar, received lands assessed at Rs. 1,000; Munshi Lachhman Sarúp, lands assessed at Rs. 200, and Chandráin Chánd Kunwar, of Khúrja, lands assessed at Rs. 557.

(17.) Muni Lál, the agent of the Skinner estate, was rewarded with a *khilat* of Rs. 1,000.

(18.) Daulat Singh, Bakshi Singh, and Harsahái Singh, of Jewar, received lands assessed at Rs. 763, and Hazári Singh and Mohar Singh, of Dayánatpur, lands assessed at Rs. 388.

(19.) Rái Munnu Lál received estates valued at Rs. 1,000; Harsukh Rái, agent of the Kuchchesar Játs, lands assessed at Rs. 500, and Thán Singh, Ahír of Kota, lands assessed at Rs. 300 and a gratuity of Rs. 500.

The punishments awarded to the disaffected were no less comprehensive.

(1.) Walidád of Málágarh escaped across the Ganges and was never captured. His fort was razed to the ground and all his property was confiscated.

(2.) Ismaíl Khán, once a trooper in Skinner's horse, and subsequently kotwál of Jalandhar and again of Meerut, joined Walidád's service shortly before the outbreak. After the fall of Málágarh he fled to Bareilly, and thence to Sháhjahánpur, where he was tried, convicted and sentenced to imprisonment for fourteen years. Ismaíl Khán was subsequently pardoned, and is now in the service of the Nawáb of Rámpur.

(3.) Ghulám Haidar Khan was owner of four villages in parganah Baran. He was collector of the revenue to Walidád, and after the fall of Málágarh

concealed himself. He returned under the amnesty, but his estates have been confiscated.

(4.) Mahdi Baksh, the principal adviser of Walidád, was sentenced to transportation for fourteen years. His property was saved owing to the services rendered by his son Ahmad Hasan in the Saháranpur district. His is but one of the many instances of a family arrangement by which one member of the family took one side and another took the other side, so as to insure success whatever might happen.

(5.) Rahím Ali Khán of Khailiya, a grandson of the celebrated Dúndi Khán, with his father Mazhar Ali Khán, raised the standard of revolt at the same time as Walidád. On the expulsion of the latter both fled to Bareilly, and thence made their way to Rajputána. They were arrested there by Major Eden and sent for trial to Agra. Mazhar Ali Khán died on the road, and Rahîm Ali was tried, convicted, and sentenced to transportation for life, with confiscation of his estates. He was one of those concerned in the murder of Major Waterfield on the Grand Trunk Road.

(6.) Abdul Latíf Khán, of Khánpur, the head of the Patháns of the Bárah Basti, was punished with confiscation of his property and transportation for life. He actively sided with Walidád, and in every way opposed the restoration of order.

The Shaikh and Bahlim revenue-free grantees of Bulandshahr were deprived of their property for siding with Walidád, whilst the Sayyid grantees of Shikárpur lost theirs for adhering to Rahím Ali Khán, and a number of Patháns suffered for espousing the cause of Abdul Latíf Khan. According to Kunwar Lachhman Singh the following landholders escaped the puishment due to their acts owing to the amnesty :—

(1.) Mustafa Khán, of Jahángírabad, a relative of Walidád, corresponded with Dehli and assisted the disaffected. He was sentenced to seven years' imprisonment, but was subsequently pardoned.

(2.) Ráni Chauhán, of Anúpshahr, belonging to the old Badgujar family of that ilk, tried to recover the estates belonging to her ancestors with a view of setting up her son as future Raja of Anúpshahr. Her remaining estates were confiscated, but were afterwards released.

(3.) Faiz Ahmad Khán, of Malakpur, escaped by the amnesty whilst still under trial.

(4.) Ghulám Ghaus, a Bilúch zamíndár of Jhajhar, was sentenced to seven years' imprisonment and the confiscation of his property for harbouring mutineers, but as he had aided in saving the life of a European he was pardoned.

(5.) Hurmat Khán, of Pindráwál, escaped by the amnesty whilst still under trial.

All through the disturbances, the Játs, as a rule, sided with Government, whilst the Gújars and Musalmán Rajpúts bitterly opposed all authority. The Gújars, Musalmáns, and the Sayyids of Járcha took a leading part in the sack of Sikandarabad. They were heavily fined and their estates were confiscated for the offence. The Bargala Rajpúts of the whole tahsíl of Sikandarabad also distinguished themselves for turbulence and disloyalty. The only other events of note connected with this district are the famine of 1860-61, the settlement of the land-revenue in 1860-65, and the establishment of a model farm[1] for the encouragement of agriculture in the upper Duáb, each of which is noticed in its proper place.

[1] Abandoned from July, 1875.

GAZETTEER

OF THE

BULANDSHAHR DISTRICT.

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ADA, pronounced Ara, a village of parganah Sikandarabad and tahsíli of the same name, in the Bulandshahr district, lies five miles west of the civil station and the same distance east of Sikandarabad. The population in 1865 was 1,190, and in 1872 was 1,618. In Akbar's time it was the head of a mahál or parganah belonging to the sirkár of Dehli, and paying 5,13,081 *dáms*, which at twenty double *dáms* per rupee gives a revenue of Rs. 25,554. It was

absorbed in Sikandarabad in 1844. The name is said to be derived from a colony of Ahárs, some of whom bearing the title of Chaudhri still reside in the town. The Musalmán residents are respectable and fairly well off.

AGAUTA, a parganah of the Bulandshahr district, is bounded on three sides by parganahs Sikandarabad, Baran, and Sayána of the same district, and on the north by parganahs Dásna and Hápur of the Meerut district. It contained in 1872 a total area of 101 square miles, of which 80 square miles were under cultivation. The area assessed to Government revenue during the same year was 98 square miles, of which 77 square miles were cultivated, 11 square miles were culturable, and 10 square miles were barren.

General appearance.

The Káli Nadi flows through the very centre of the parganah, dividing it into two almost equal parts. A large canal *rájbaha* or water-course traverses the length of the western side. Irrigation is carried on from the Káli, which is used as a canal escape, and kept supplied with water from the canal. This water also is sold by the Irrigation Department. The result of the use of the Káli as an escape is that considerable damage has been done to about forty villages near and below where the escape falls into the Nadi, but this has however been partially remedied by straightening the course of the river. Another large *rájbaha* flows between the Grand Trunk Road and the Nadi, and a large *gúl* or channel is taken out of the Sonpur *rájbaha*, and runs along the Grand Trunk Road on the west and falls into the same *rájbaha* at Baral. East of the Káli Nadi irrigation from wells prevails. Owing to the facilities existing for the construction of temporary wells there are few masonry ones, the numbers being 2,000 of the former to 312 of the latter. The soil is nearly all good *seota*, there being only about five per cent. of the inferior soils known as *bhúr* and *pilota*. This character, with the amount of irrigation and the presence of the industrious Játs, Ahírs, and Chauháns as cultivators, renders the parganah very prosperous. In addition to the ordinary cereals, cotton, indigo, and sugarcane are extensively grown. In the western half there is little culturable waste, but in the eastern half there is a somewhat large tract of waste land fit for the plough within the areas of Sharífpur, Baisrauli, Babanpur, Pabsára, &c. In places there is good culturable land partly covered with *dhák* jungle and interspersed with low marsh lands called *duhars*, which yield the long thatching grass known as *púla*, whilst in places it is entirely barren. The Grand Trunk Road traverses the parganah from north to south, running almost parallel to the Káli. A road also runs from Galáothi to Sikandarabad, but the eastern portions of the parganah are as yet unsupplied with roads. The principal villages are Sentha, Galáothi, Málágarh, Makhdúmnagar, Agauta, and Zainpur. Makhdúmnagar was entirely revenue-free, but one-half was confiscated for the rebellion of Chirágh Ali in 1857. Zainpur is held revenue-free by

Bháts. Ata and Asáwar were conferred on Ratan Singh and Gopál Singh for loyalty.

Fiscal history.

The assessment of this parganah at the past settlement under Regulation IX. of 1833 was very light, and there was not a single coercive process issued for the recovery of the land-revenue during its currency. The alienation statements show that, with the exception of confiscated villages, only three entire villages and fifteen portions of other villages have changed hands during the same period. Out of the 111 estates comprised in the parganah in 1865, 71 were *zamíndári*, 20 were *pattidári*, and 20 were *bháyachára*; 1,532 holdings were cultivated by proprietors, 871 by hereditary cultivators, and 3,832 by tenants-at-will. The new assessment was made by Mr. C. Currie in 1859. The following statement gives the statistics of the expiring revenue of the past and the initial revenue of the present settlements and those collected in 1871 :—

Settlement.	Total area.	Barren and unassessable.	Culturable.	*Cultivated.*			Revenue with cesses.	*Incidence of revenue with cesses on*		
				Irrigated.	Dry.	Total.		Total area.	Entire culturable area.	Cultivated area.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.	Rs. a. p	Rs. a p.
Past, ...	63,340	9,774	14,033	11,938	27,505	39,533	77,474	1 3 6	1 7 1	1 15 4
New, ...	64,246	8,997	9,936	31,607	13,706	45,313	88,799	1 6 1	1 9 8	1 15 4
1871, ...	64,246	8,997	9,936	31,608	13,705	45,313	97,900	1 8 4	1 12 4	2 2 6

The statistics of 1872 show that the land-revenue then amounted to Rs. 89,000 (or with cesses Rs. 98,255), falling at a rate of Re. 1-6-0 per British acre on the total area then assumed; at Re. 1-6-8 per acre on the area assessed to Government revenue, and at Re. 1-12-10 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 2,50,817.

Population.

According to the census of 1872 parganah Agauta contained 94 inhabited sites, of which 16 had less than 200 inhabitants, 37 had between 200 and 500, 25 had between 500 and 1,000, 11 had between 1,000 and 2,000; 3 had between 2,000 and 3,000, and one had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants in the parganah is Galáothi, with 5,608. The settlement records show that in 1865 there were then 90 villages, distributed amongst 111 maháls or estates. The total population in 1872 numbered 62,161 souls (26,351 females), giving 615 to the square mile. Classified according to religion, there were 45,420 Hindús, of whom 21,174 were females; 16,734 Musalmáns, amongst

whom 8,173 were females; and there were seven Christians. Distributing the Hindu population amongst the four great classes, the census shows 5,009 Brahmans, of whom 2,371 were females; 2,836 Rajpúts, including 1,259 females; 2,336 Baniyas (1,071 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 35,239 souls, of whom 16,473 are females. The principal Brahman subdivision is the Gaur (4,767), and amongst Rajpúts, the chief clans are the Chauhán (1,112), Badgújar (87), Panwár (29), Jádon (321), Bais (254), Gahlot, Gaur, Bhadauriya, Ráthor, and Jairaniya. The Baniyas belong, for the most part, to the great Agarwál subdivision (2,073), and their allied caste, the Dasas, (263). Amongst the other castes the most numerous are the Lodhas (1,198), Kahárs (944), Játs (6,974), Hajjáms (1,112), Chamárs (9,573), Khákrobs (2,515), Ahírs (1,768), Kolis (1,352), Gújars (3,236). The following castes have less than one thousand members each :—Bohra, Ahar, Darzi, Kalál, Barhai, Khatík, Dhobi, Gararíya, Lohár, Kumhár, Sonár, Gosháin, Jogi, Dhúna, Bhát, Káyath, Bharbhúnja, Bairági, Máli, Chhípi, Aheriya, Orh, and Joshi. The Musalmáns are entered as Shaikhs, 1,163; Sayyids, 1,213; Patháns, 316; converted Hindús, 2,824; and without distinction over 11,000.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 200 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,908 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,065 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 11,016 in agricultural operations; 2,595 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,965 persons returned as labourers and 359 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 3,182 as landholders, 27,960 cultivators, and 31,019 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,119 males as able to read and write out of a total male population numbering 32,810 souls.

History.

The Tagas were the original dominant race and proprietors of the soil in this parganah, but were expelled by the Chauháns and Gújars, and the returns of 1872 show only one person of the clan in the parganah. The Chauháns got possession of thirty-two villages still known as the "*Chauhánon ke Batísa*," and the Gújars acquired twelve villages still known as the "*Gújaron ke bára Nadwása.*" The Chauháns have lost most of their villages by private sale or mortgage, and the Gújars by

confiscation for rebellion; both are now mere cultivators, except in two villages and thirteen small shares held by the Chauháns and in two villages held by the Gújars. Játs hold twenty-six villages, the Skinner's estate four, and the remainder are divided in twos and threes among Sayyids, Shaikhs, Bilúches, Baniyas, Káyaths, Ahírs, Rajpúts, Brahmans, and Badgújars. Previous to Akbar's time the country was known as the Chauhán Batísa, and his ámils formed the present parganah under the name of mahál Sentha. The Marhattas sent an ámil to overawe the Chauháns, who took up his residence at Agauta, and the name was then changed to Agauta. In 1803-04 the Chauhán villages and four others amounting to thirty-six were leased to Bahádur Khán, a Marhatta employee, and formed part of the district of southern Saháranpur (Meerut): hence the name Málágarh sometimes given to this parganah. (See MÁLÁGARH.) In 1824 the lease was recalled, and in 1844 three villages were withdrawn and 57 added, making altogether 90 villages, which with one subsequently formed comprise the present parganah.

AHÁR, an old town in the Bulandshahr district, gives its name to a parganah of tahsíl Anúpshahr, and is situated upon the right bank of the Ganges, 21 miles north-east of the town of Bulandshahr. The population in 1865 numbered 2,324 souls, and in 1872 was 2,414. It possesses a police-station, post-office, and an Urdu halkahbandi or village school. A large fair is held here on the tenth of the light half of Jeth, at which crowds assemble to bathe in the Ganges. The town abounds in temples of some antiquity, the most remarkable being one in honour of Mahádeo. Ahár, being situated on a navigable river, is a fairly prosperous commercial town of third-rate importance. A bridge-of-boats is kept up here for the dry months of the year. The name Ahár is locally derived from '*ahi*' and '*hár*,' the killing of the serpent, and the present town is said to be the place where Janamejaya performed the great snake-sacrifice,[1] and rewarded the Nágar Brahmans and others who assisted him with grants of lands in the vicinity. Ahár also lays claim to be the Kausambhi to which the Pandáva rulers of Hastinápur transferred the seat of government after Hastinápur had been swept away by the Ganges—a pretension unsupported by probability or evidence. The people of Ahár also claim for it the honour of being the residence of Rukmini, wife of Krishna and daughter of Bhísmak, Raja of Vidarbha. The temple of Ambika, from which Krishna decoyed Rukmini away, is still pointed out by the Brahmans of Ahár as situated on the Ganges about two miles below the present town. This claim also must be negatived, as Kundilpur, the capital of Bhíshmak, has been identified with the old chief town of Berar. There are several large tumuli (*khera*) in and about Ahár which testify to the great antiquity of the place, and there is little reason to doubt that it was the seat of a petty Hindú principality for some centuries

History.

[1] Wheeler's Mahábhárata, I, 46.

previous to the Musalman occupation.[1] The Nágar Brahmans of Ahár state that they received a *chaurási* (84) of villages from Janamejaya in reward for the assistance given by them in the snake-sacrifice. In Alamgír's reign the majority of these Brahmans became Musalmáns, and retained the proprietary right in the town until 1857, when the majority of them behaved very badly, and lost their property, which was conferred on Raja Gursahi Mal of Moradabad. In the time of Akbár Ahár was the capital of a mahál or parganah attached to dastúr Thána Farída of sirkár Koil and súbah Agra, and paid a yearly revenue of 21,06,554 *dáms*, or about Rs. 1,05,327.

AHÁR, a parganah in tahsíl Anúpshahr of the Bulandshahr district, is bounded on the east by the Ganges, on the west by parganah Baran, on the north by parganah Sayána, and on the south by parganas Anúpshahr and Shikárpur of the same district. According to the census of 1872 this parganah had then a total area of 147 square miles, of which 107 square miles were under cultivation. The area assessed to Government revenue during the same year was 147 square miles, of which 107 square miles were cultivated, 2 square miles were culturable, and 17 square miles were barren.

Though it has a considerable river frontage, Ahár has little *khádir*, as the Ganges banks are high along this parganah. The Anúpshahr branch of the Ganges Canal passes down the parganah at an average distance of about three miles from the Ganges, just within the line of poor sandy soil lying along the river. This tract, owing to the depth of the water-level and lightness of the soil, is badly off for irrigation. Further west, and in the centre also, the *kuchcha* wells re-appear, and the soil is more firm and productive. Nothing but the common cereals are grown, nor is indigo, cotton or safflower raised for export. There are no important roads, and very little traffic. The principal towns are Ahár and Khánpur. The cultivators are principally Lodhas, Patháns, Játs, and Rajpúts. Of these the Játs and Lodhas are the best. As a rule, the cultivators are not well off, as they were much harassed by Abdul Latíf Khán, and his father Ibádullah Khán before him. Between the canal and the Ganges the average depth of water from the surface is 25 to 30 feet, and in the remainder of the parganah it rises to 18 feet 8 inches, with a depth of water in the wells averaging 6 feet 8 inches. Irrigation is scanty, the proportion in 1865 being only 26 per cent. of the cultivated area. The canal is dry beyond Anúpshahr, but the new works at Narora will relieve the main channel and admit of some extension of irrigation beyond the two rájbahas at present in existence. Between Khánpur and Garaouli there are large tracts of uncultivated lands, mostly covered with

General appearance.

[1] Rashíd-ud-dín, quoting from Al Birúni, who flourished between 970 and 1039 A.D., mentions Ahár in the itinerary from Kana j to Meerut, *viz.*, Kanauj to Dayamau, 10 *parasangs*; to Ghâti, 10; to Ahár, 10; and to Meerut, 10. Dowson's Elliot, I, 62.

dhák jungle, and generally good and culturable, but interspersed with patches of poor and bad land.

Fiscal history.

The settlement of the parganah under Regulation IX. of 1833 by Messrs. G. Bird and Tonnochy was a fair and adequate one. The villages held by Abdul Latíf Khán as owner were somewhat lightly assessed, and in those held by him as mortgagee the demand was rather heavy. Omitting confiscations, the transfers have been very light during the currency of the old settlement, and of the two villages transferred by decree of court only one was a real transfer, the other belonged to Mustafa Khán's collusive transfer noticed under the Anúpshahr parganah (page 115). Of the 146 estates in the parganah, in 1865, 129 were zamíndári, 6 were perfect pattidári, 8 imperfect pattidári, and 3 were bháyachára; 325 holdings were cultivated by proprietors, 2,748 by hereditary cultivators, and 3,544 by tenants-at-will, and nearly all now pay rent in cash. The assessment of the new revenue was made by Messrs. Currie and Lowe in 1860-61, and came into force from 1862-63. The increase in the irrigated area is more considerable than the increase in the cultivated area. The following statement shows the statistics of the expiring revenue of the past and the initial revenue present settlement:—

Settlement.	Total area.	Barren and unassessable.	Culturable.	*Cultivated.*			Revenue with cesses.	*Incidence of revenue and cesses on*		
				Irrigated	Dry.	Total.		Total area.	Entire culturable area.	Cultivated area.
	Acres.	Acres.	Aces.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.	Rs. a. p	Rs. a. p.
Past,	90,821	7,464	29,307	11,125	42,925	54,050	79,756	0 14 1	0 15 3	1 7 7
New,	93,617	11,079	23,751	15,770	43,017	58,787	87,675	0 15 0	1 1 0	1 7 10
1871...	91,918	10,042	23,168	15,744	42,964	58,708	91,267	0 15 11	1 1 10	1 8 10

The land revenue for 1872, according to the census returns, amounted to Rs. 82,969, falling at a rate of Re. 0-14-1 per British acre on the total area, at Re. 0-14-1 per acre on the area assessed to Government revenue, and at Re. 1-3-5 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 3,09,441.

Population.

According to the census of 1872, parganah Ahár contained 127 inhabited sites, of which 37 had less than 200 inhabitants, 53 had between 200 and 500, 25 had between 500 and 1,000, 10 had between 1,000 and 2,000, one had between 2,000 and 3,000, and one had between 3,000 and 5,000. The settlement records show that in 1865 there were then 134 villages on the register, distributed amongst 146 mahals or estates. The total population in 1872 numbered 61,048 souls (28,910 females), giving 415 to the square mile. Classified according to religion, there were 49,248 Hindús, of whom 23,108 were females, and 11,800

Musalmáns, amongst whom 5,802 were females. Distributing the Hindu population amongst the four great classes, the census shows 5,323 Brahmans, of whom 2,487 were females; 5,596 Rajpúts, including 2,498 females; 1,580 Baniyas (745 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 36,749 souls, of whom 17,378 are females. The principal Brahman subdivisions found in this parganah are the Gaur (3,912), Sanádh and Nágar. The chief Rajpút clans are the Chauhán (667), Badgújar (915), Panwár (82), Játon (588), Bais (315), Bhala Sultán, Baghel, Dor, Báchhal, Jarauliya, Mahesri, Bargala, and Jajil. The Baniyas belong to the Agarwál (1,032) and Dasa (384) subdivisions. Amongst the other castes, the most numerous are the Lodha (10,317), Ját (2,123), Chamár (9,736), Khákrob (1,710), Gararíya (1,692), Máli (1,109), and Gújar (2,044). Besides the above castes, the following are found in this parganah with less than one thousand members each:—Darzi, Kalál, Barhai, Kahár, Hajjám, Khatík, Dhobi, Koli, Kumhár, Sonár, Gosháin, Jogi, Dhúna, Bhát, Káyath, Bharbhúnja, Bairági, Aheriya, Taga, Orh, Joshi, Káchhi, Malláh, Mína, Khági, Chauhán, and Nat. The Musalmáns are distributed amongst Shaikhs (1,580), Sayyids (118), Mughals (54), Patháns (2,524), converted Hindús (857), and the remainder are entered without distinction.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 124 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,720 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 820 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 11,654 in agricultural operations; 2,042 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,554 persons returned as labourers and 333 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 1,044 as landholders, 35,789 as cultivators, and 24,215 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 722 males as able to read and write out of a total male population numbering 32,138 souls.

History.

Before the Musalmán invasion this part of the country was known as the *chaurási* (or 84 villages) of the Nágar Brahmans, who, with the Gorwa Rajpúts, divided the parganah between them. Shortly after the Musalmán conquest these tribes were ousted by the Badgújars and Patháns; the latter first settled down here under King Shahab-ud-dín Ghori and first gained importance under the Lodís. They held twelve villages known as the "*Patháno ke bárah basti*," which are mostly in this parganah

but some are in Sayána. (See BAGRÁSI.) These men still make capital recruits for the Bengal cavalry. Akbar formed Ahár into a parganah attached to dastúr Thána Faridá in the sirkár of Koil and súbah of Agra, and stationed an ámil here. In 1803 Ahár was incorporated with the Meerut district, and in 1824 was transferred to Bulandshahr. In 1844 the number of villages was fixed at 134, and in 1859 the parganah was transferred from the Baran tahsíl to Anúpshahr. Previous to 1857 Abdúl Latíf Khán, of Khánpur, held 85 villages in the parganah, but these have all been confiscated. The Nágars held 8 villages, but the Musalmán portion lost four for rebellion. The Játs of Kuchchesar own 55 villages, and the Káyaths of Nabinagar own seven villages; the few remaining villages are principally held by Rajpúts.

AHMADGARH, a village of parganah Pahásu of the Bulandshahr district, is distant 28 miles south-east from Bulandshahr and 6 miles north from Pahásu on the Rámghát road. The population in 1865 numbered 2,228 souls, and in 1872 there were 2,621 inhabitants. The village was founded by Ani Rái, the Badgújar Raja of Anúpshahr, who named it after his own title[1] of Ahmad Khání. Local tradition, however, says that the town was founded by Hem Singh or Ahmad Khán, a Badgújar, and near relative of Ani Rái. Hem Singh, too, basked in the sunshine of Jahángír's smile, and was treated by him with much favour. A large tank, or rather small lake, stretched from north-west to north-east of the town. On the borders are the ruins of some stately buildings now called the *hammám* or bath, and intended apparently in the old time for the use of the ladies of the fort. The town with six other adjoining villages, formerly hamlets belonging to it, was granted in *jágír* to Raja Mádho Rám, Khattri, by Mádhoji Sindhia in 1778 A.D., at a fixed rent of Rs. 1,200, and the British Government in their treaty with the Maháraja agreed to respect the grant. They have done so to the extent of excluding from settlement the descendants of Hem Singh who have been Musalmáns since the time of Aurangzeb, and on the death of Rao Bihari Náth, the last jágírdár, in 1870, the six hamlets were settled with his representatives, and the town was settled with the original proprietors. The tank produces vast crops of water-nuts, but detracts from the healthiness of the town. A market is held on Saturday. There is a post-office and a school.

ANÚPSHAHR, a town[2] in the parganah of the same name in the Bulandshahr district, is situated on the right bank of the Ganges 25 miles to the east of Bulandshahr, in latitude 28°-21′ and longitude 78°-18′-55″. It is the headquarters of the tahsíl of the same name. The population in 1830 numbered 8,072 souls, of whom 6,026 were Hindús and 1,866 were Musalmáns. There were then 1,723 families residing in 893 enclosures. In 1847 the inhabitants numbered 8,947 souls; in 1853 the numbers had increased to 9,414, and in 1865 to

[1] Beames' Elliot, II., 99. [2] This town and Jahángírabad were transferred to Aligarh in 1805. Board's Rec., February 1, 1805, No. 20.

10,644. There were 9,336 inhabitants in 1872, of whom 7,190 were Hindús (3,417 females) and 2,146 were Musalmáns (970 females). The site occupies 123 acres, giving 76 persons to the acre.

The site.

The town is situated on the high western bank of the Ganges, and part of it has been carried away, at various times, by the action of the river, so that the remains of masonry wells now stand like pillars in the present bed of the river. During the cold weather the deep stream of the Ganges keeps to the Budaon side of the river bed, leaving a large level expanse of white sand between it and the base of the cliff upon which Anúpshahr is built. The site itself is long and narrow, and well drained by the ravines which surround it, especially on the south, where it is bounded by the Aligarh and Moradabad road. The road from Bulandshahr enters the town from the north, and runs south to join the Aligarh road. It forms the principal bazarway. The Bazar-i-masjid, at first entered from the south, contains some poor shops: then comes the Bazar kalán with better shops, often two-storeyed, and at right angles to it a second bazar runs through the short diameter of the town, and further north the *mandi* or grain market opens off the Bazar kalán. The *mandi* is a square, about fifty yards wide, surrounded on three sides by substantially built grain shops. Beyond the *mandi*, the bazar continues for some distance and ends in the Bulandshahr road. On the whole the houses are chiefly built of mud, and with the exception of the Brahman quarter and the Garhi muhalla on the site of Tára Singh's fort, there are few brick-built houses to be seen. On the western side the houses are so connected together as to form somewhat the appearance of a wall, beyond which the land sinks down, suddenly partaking of the character of a wide sandy ravine, water from which drains by a bridge northward under the Bulandshahr road to reach the Ganges. There are no stagnant water-holes around, and the entire site is well drained.

Public offices.

To the south, the Aligarh roadway, a fine, level metalled road, has been fixed upon as the proper site for the public institutions. On the slope of this road is a fine bazar known as Websterganj, from its founder Mr. Webster, C.S. The shops have been sold to Baniyas at from Rs. 200 to Rs. 500 each, and rent at from four annas to one rupee per mensem. The road is connected with a bridge-of-boats, which is kept up over the Ganges for about eight months in the year, but, owing to the shifting nature of the river-bed, it is little used by cartmen. The high road, before it reaches the bazar, has the post-office and dispensary on one side of it, both of which are neat brick-built buildings; the former was built in 1866, and the latter was established in 1870. The dispensary costs Rs. 504 per annum, derived from private subscriptions, except the cost of the Native Doctor's pay, which is defrayed by Government. On the other side of the road are the

tahsíli and schoolhouse. The tahsíli was built in 1860-65 at a cost of Rs. 13,479, and contains the office of the Sub-Collector of the land-revenue and the police-station. The Anglo-vernacular school, built in 1864, has an average of 47 pupils, and is maintained at an annual cost of Rs. 840, half of which is defrayed by public subscription. A village school is maintained from the education cess, and has an average attendance of about 80 pupils. The principal muhallas or wards are the Ahár Darwáza, Garhi, Nagarseli, Kedársáh, Mánik Chauk, Chhípianti, Pokhar, Khirki, Patpuri, Játiyána, Mori Darwáza, Chatta Bazar, Talla and Malla Muhallas. There is nothing in their names or histories demanding special notice. On the river side the houses are broken up into clusters by the ravines leading to the Ganges, and the principal way lies in the bed of the river. Many of the interior streets and lanes are metalled, as also the ways leading down to the rivers. There is one fine mosque in the Bazar-i-masjid, and another is being built near the river.

The town is the resort of Hindú pilgrims, who bathe in the Ganges here at certain seasons. The largest assemblage is on the day of the full moon in the month of Kárttik, at which time some hundred thousand pilgrims collect from all quarters. Smaller fairs are held at the time of a lunar or solar eclipse. The Ganga Darwáza in a tree-grown ravine leading down to the Ganges and the Madár Darwáza are the principal bathing-places, and the Gujráti Brahmans who attend the ghâts reside, for the most part, in the Garhi Muhalla. A large house with a garden overlooking the river belongs to the Páikpára estate, and affords accommodation to travellers and district officers when on tour. Anúpshahr lies within easy distance of Aligarh, Bulandshahr, Budaon, and Moradabad, and this position, as well as the fact of its being upon the banks of a navigable river, contribute not a little to enhance the commercial importance of the town. Next to Khúrja it is the largest cotton and grain market in the district, and the trade in timber and bambus is also extensive. Hitherto the chief traffic has been down the river to Mirzapur in wool, safflower and corn, and up the river from Farukhabad in cotton cloths. There is some local manufacture of coarse and fine cloths, blankets, boots, hackeries, soap, shoes, *jámdáni*, and indigo, and a brisk traffic in these commodities with the neighbouring villages in exchange for grain. The trade in former times must have been considerable, but since the opening of the Rájghát Station on the Oudh and Rohilkhand Railway, about nine miles south-east of Anúpshahr, much of the traffic is said to have been diverted. The affairs of the town are managed by a municipality consisting of 15 members, five of whom are official and ten are elected by the tax-payers. The income is derived from an octroi tax supplemented by a house-tax. A proper conservancy establishment is kept up, and much attention is directed to local improvements.

Fairs and trade.

The following table shows the income and expenditure of the municipality for the year :—

Receipts.	1870-71.	1871-72.	1872-73.	Expenditure.	1871-72.	1872-73.
	Rs	Rs.	Rs.		Rs.	Rs.
Opening balance, ...	1,093	1,333	599	Collection, ...	678	689
Class I. Food and drink, ..	2,827	2,326	3,068	Head-office, ...	281	278
„ II. Animals for slaughter,	10	12	14	*a.* Original works,	1,060	325
„ III. Fuel, &c., ...	256	129	174	*b.* Supervision, ...	...	...
„ IV. Building materials, ...	142	378	423	*c.* Repairs, &c., ...	649	809
„ V. Drugs, spices, ...	350	237	221	Police, ...	2,034	1,905
„ VI. Tobacco, ...	9	86	120	Education, ...	110	59
„ VII. Textile fabrics, ...	...	388	458	Conservancy, ...	984	989
„ VIII. Metals, ...	...	90	115	Charitable grants, ...	245	220
Total of octroi, ...	3,594	3,706	4,594	Refunds, ...	50	2
Tax on houses, ...	747	758	754	Miscellaneous, ...	12	59
Rents, ...	35	13	20			
Fines, ...	80	95	66			
Pounds, ...	...	109	89			
Miscellaneous, ...	624	465	465			
Extraordinary, ...	773	216	...			
Total, ...	6,945	6,701	6,586	Total, ...	6,132	5,327

The incidence of the octroi during 1872-73 was Re. 0-9-2 per head of the population. The imports and consumption per head for two years are shown below : the imports of cloth and metals for 1872-73 are only for ten months:—

Articles.	Quantity imported in 1871-72.	Quantity imported in 1872-73.	Consumption per head in 1872-73.	Consumption per head in 1873-74.	Articles.	Value of imports in 1872-73.	Value of imports in 1873-74.	Consumption per head in 1872-73.	Consumption per head in 1873-74
	Rs.	Rs	Mds. s. c.	Mds. s. c.		Rs.	Rs.	Mds. s. c.	Mds. s. c
Wheat, ...	23,590	26,054	2 19 12	...	Fruits, ...	2,130	1,647	0 3 7	..
Barley, ...	18,347	21,190	1 39 11	...	Ghi, ...	14,596	13,172	1 8 8	1 3
Other grains,	17,627	20,631	2 5 10	...	Fodder, ...	1,142	1,179	...	...
Rice, ...	2,624	3,220			Gúr, ...	7,981	10,434	0 13 6	...
Vegetables,	1,341	1,076	6 25 1	7 24 4	Shíra, ...	5,547	1,008	0 0 11	...
Oil-seeds,...	2,024	2,573	0 5 10	...	Khand, ...	10,014	16,577	1 0 11	...
Gúr, ...	...	945	0 8 10	0 11 0	Sugar, ...	3,617	2,516	0 6 1	...
Shíra, ...	...	226	...	0 13 7	Pán, &c ,	1,391	1,365	...	...
Khand, ...	...	224	...	0 4 5	Oil, ...	2,887	2,965	0 4 10	1 1 2
Sugar, ...	...	270	...	0 7 2	Fuel, ...	896	1,117	...	...
Ráb, ...	...	653	...	0 3 5	Building materials.	12,186	13,550	1 4 7	...
				0 2 12	Spies, ...	7,672	7,122	0 12 11	0 12 0
					Tobacco,...	2,747	3,442	0 4 7	0 2 11
					Cloth, ...	37,018	44,395	3 14 7	4 11 8
					Metals, ...	9,170	11,585	0 15 6	1 3 9

History.

The town of Anúpshahr was built by the Badgújar Raja Anúp Rai in the reign of the Emperor Jahángír on an old *khera* or mound known as Bhador. Jahángír in his memoirs mentions the courage displayed by the Raja whilst attending the emperor on a hunting

excursion. For this service Anúp Rái received the title of Ani Rái Singh Dalan, and a grant of 84 villages on each side of the Ganges. Jahángír formed these villages into a separate parganah. The ruins of a brick fort and temple built by Ani Rái still exist below the remains of the old manufactory of the East India Company. In the seventh generation, Tára Singh and Mádho Singh, sons of Achal Singh, divided the hitherto united family property amongst themselves. Tára Singh made Anúpshahr his head-quarters and Mádho Singh took Jahángírabad. Tára Singh improved the town very much, and so patronised men of letters and learned pandits that the town came to be popularly known as the "little Benares." On the death of Tára Singh without issue, the three sons of Mádho Singh distributed the estate amongst themselves: Umed Singh obtained Anúpshahr, and Khoras Rij and Bhawáni Singh remained at Jahángírabad. During the dissensions that ensued, one of the Ránís, rather than submit to some degradation, blew up the fort and perished in the ruins along with several of her adherents. Five years afterwards the destruction of the place was completed by the army of Asaf-ud-daula, and since then the family began to decline rapidly. An account of this family is given in the history of the rise and fall of old families in the district notice. Treasure was said to have been concealed in the fort, but it has since been abstracted. For many years subsequent to the British occupation persons used to employ themselves in digging for money amid the ruins and were, in some instances, successful.

In modern history Anúpshahr is remarkable as the site chosen for his cantonments by Ahmad Sháh Abdáli in 1757 A.D., when he proceeded to parcel out the fiefs of Upper India amongst those whom he wished to honour. And at the close of 1759 he again pitched his tents around the town and organised the famous coalition of the Musalmáns of Upper India against the Játs and Marhattas, which led to the battle of Panipat in 1761. In 1773 A.D. the forces of the Oudh Vazír and the British made Anúpshahr their rendezvous when opposing the Marhatta invasion of Rohilkhand. The allies nearly surprised a body of four thousand Marhatta horse whilst fording the Ganges about five miles below Rámghát, to reinforce their friends on the other side. The greater part of the Marhattas had got as far as the middle of the river when the British army came in sight, upon which the Marhattas suddenly returned and marched up the western bank towards Rámghát, whilst the allied troops took the opposite bank until they arrived at Asudpur, opposite the Marhatta encampment. Here the Marhattas commenced a cannonade against the English, but this was soon answered by the latter with such effect as presently to silence the Marhatta artillery and oblige their whole army to change their ground with some precipitation.[1] The Marhattas retired by Etáwa to their own country in May, 1773. From this time until 1806, with the exception of one or two short

interruptions, such as during the brief ascendancy of Francis's opposition in the Calcutta Council, Anúpshahr remained an outpost of British troops[1] until the garrison was transferred to Meerut. The only memorials, however, of the long continued presence of British troops in the vicinity, now to be found, are in the two cemeteries crowded with nameless graves. In 1805, Sher Singh, Badgújar, received a large remission of revenue for his services in protecting the station against an attack of Dúndi Khán.[2] Anúpshahr is considered a very healthy place, and has not been visited with any of the epidemics which are so common in the upper districts. A noted family of Hindú physicians reside here who are largely consulted by all classes, and seem to be very skilful in their treatment, if one may judge from the success they meet with and the high repute in which they are held. In the mutiny Anúpshahr is noted for the successful defence of the boats by Khushi Rám and his Játs mentioned in the history of the mutiny in this district (page 95). The proprietary right in the town site now belongs to the Páikpára estate in trust for the Brindaban temple in the Muttra district. The principal banker in the town is one of the Gujráti Brahmans of the Garhi Muhalla. Anúpshahr lies on the military route from Aligarh to Budaon, and is distant 12 miles from Dánpur, the stage next Aligarh (see DÁNPUR), and 14 miles from Gunnaur in the Budaon district. The road is metalled throughout. To Gunnaur the Ganges is crossed by a bridge-of-boats in the dry weather, and by a ferry in the rains (river a mile wide in the rains, and fifty boats can be collected after a little notice).

ANÚPSHAHR, a parganah in the tahsíl of the same name in the Bulandshahr district, is bounded on the east by the Ganges, which separates it from parganah Rájpura of the Budaun district, and on the other three sides it is bounded by parganahs Ahár, Shikárpur, and Dibái of the Bulandshahr district. This parganah, according to the census of 1872, had then a total area of 121 square miles, of which 91 square miles were under cultivation. The area assessed to Government revenue during the same year was 120 square miles, of which 90 square miles were cultivated, 16 square miles were culturable, and 14 square miles were barren.

General appearance.

The Anúpshahr branch of the Ganges Canal, formerly known as the Fatehgarh branch, traverses the parganah from end to end, running parallel to the direction taken by the Ganges. Where it enters the parganah it is distant about five miles from the Ganges, and gradually approaching that river is only half that distance apart when it passes into parganah Dibái. The soil within two to three miles of the high banks of the Ganges is light, sandy and of inferior quality, and as the water lies as low as from 30 to 35 feet in this tract, temporary wells are not practicable, and masonry wells are too expensive. The best villages are in the centre

[1] Keene's Moghul Empire, 100.

[2] Board's Rec., August 13, 1805, No. 16; 19th November, 1805, No. 9; 13th May, 1806, No. 21.

of the parganah, where the soil is of excellent quality and very productive, and wells are common. Though the river frontage is considerable, the *khádir* lands are confined to the villages above the town of Anúpshahr, and are all liable to fluvial action. The principal products are indigo, cotton, and safflower. The indigo of Malakpur and the safflower of Sankni are famous. In 1865 there were 1,875 acres under indigo, 1,250 under safflower, and 1,000 under cotton. There is very little sugarcane grown. Mango topes abound in the west of the parganah. The principal roads are the two metalled lines connecting Anúpshahr with Bulandshahr and Aligarh respectively, and the unmetalled road through Malakpur and Shikárpur to Khúrja. The principal towns are Anúpshahr, Jahángírabad, and Malakpur.

Fiscal history.

The assessment at the revision under Regulation IX. of 1833, by Messrs. G. M. Bird and T. Tonnochy, was, on the whole, rather light, though it pressed heavily in a few individual instances. The entire parganah was composed of large compact estates, so that no transfers took place during the currency of the settlement. In the alienation statement eleven villages are entered as transferred by decree of court. These belonged to Mustafa Khán of Jahángírabad, and the whole transaction was a contrivance to avoid his creditors. He caused a suit to be brought in the name of his son, then a mere child, for execution of a deed of gift of the property. The suit was decreed in the civil court, and the decree was upheld after the mutiny, when the estates of Mustafa Khán were confiscated for rebellion. This reduces the transfers, both public and private, to almost nothing. Of the 115 estates into which the parganah was divided in 1865, 110 were zamíndári, 3 were bháyachára, and 2 were pattidári. There were 93 holdings in the occupation of proprietary cultivators, 2,669 held by hereditary cultivators, and 3,553 by tenants-at-will. Mr. Freeling assessed the parganah in 1860-61, and his revision came into force from the beginning of the same year. Mr. Lowe assessed a few of the villages, and Mr. R. Currie drew up the final report. The following statement shows the statistics of the old and new settlements; the expiring revenue of the past settlement is given :—

Settlement.	Total area.	Barren and unassessable.	Culturable acres.	*Cultivated.*			Revenue with cesses.	*Incidence of revenue and cesses on*		
				Irrigated	Dry.	Total.		Total area.	Entire culturable area.	Cultivated area.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Last,...	77,342	10,479	19 901	15,755	31,207	46,962	78,535	1 0 3	1 2 10	1 10 9½
New,...	77,183	9,449	13,658	21,881	32,200	54,081	87,351	1 2 1	1 4 8	1 9 10
1871,...	77,158	9,867	13,574	21,567	31,850	53,717	92,374	1 3 2	1 5 11	1 11 6

The land-revenue for 1872 amounted to Rs. 83,997 (or with cesses Rs. 92,408), falling at a rate of Re. 1-1-4 per British acre on the total area,

at Re. 1-1-6 per acre on the area assessed to Government revenue, and at Rs. 1-7-1 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Re. 1,92,814.

Population.

According to the census of 1872 parganah Anúpshahr contained 110 inhabited villages, of which 27 had less than 200 inhabitants, 50 had between 200 and 500, 21 had between 500 and 1,000, 7 had between 1,000 and 2,000, and three had between 2,000 and 3,000. The towns containing more than 5,000 inhabitants were Anúpshahr, with 9,336 inhabitants, and Jahángírabad, with 9,408. The settlement records of 1865 show that there were, then, 110 villages on the register, distributed amongst 115 estates (*mahál*s). The total population in 1872 numbered 69,573 souls (33,131 females), giving 575 to the square mile. Classified according to religion, there were 56,993 Hindús, of whom 27,040 were females; and 12,580 Musalmáns, amongst whom 6,091 were females. Distributing the Hindú population amongst the four great classes, the census shows 8,873 Brahmans, of whom 4,225 were females; 3,213 Rajpúts, including 1,447 females; 3,553 Baniyas (1,662 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 41,354 souls, of whom 19,705 are females. The principal Brahman subdivisions found in this parganah are the Gaur (7,576), Kanaujiya, Saraswat, Sanádh, Gujráti, Chaube, Upádhiya, Bhát, and Joshi. The chief Rajpút clans are the Badgújar (1,381), Chauhán (474), Panwár (114), Jádon (38), Bais (80), Kachhwáha, Janghára, Dhákra, Jairaniya, and Durgabansi. The Baniyas belong to the Agarwál (1,814), Dása (943), Bárasaini, and Dewai subdivisions. Amongst the other castes the most numerous are the Lodha (3,833), Kahár (2,017), Ját (6,665), Hajjám (1,041), Khattík (1,417), Chamár (12,867), Khákrob (1,672), and Máli (1,431). Besides the castes mentioned above the following are found with less than one thousand members each:—Darzi, Kalál, Barhai, Dhobi, Ahír, Garariya, Lohár, Koli, Kumhár, Sonár, Gosháin, Jogi, Dhúna, Bhat, Káyath, Bharbhúnja, Báiragi, Aheriya, Taga, Gújar, Orh. Káchhi, Teli, Malláh, Miumár, Khattri, Meo, Kori, Dabgar, and Mahá Meo. The Musalmáns are distributed amongst Shaikhs (935), Sayyids (62), Mughals (1,064), Patháns (481), converted Hindús (138), and the remainder are entered without distinction. The chief cultivators are Játs, Tagas, Badgújars, and Rajpúts, partly Musalmán and partly Hindú. The Hindú Meos are called Mína Meos, and those that are Musalmáns are known as Mewátis.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age) 368 are employed in professional avocations, such as Government servants, priests,

doctors, and the like; 2,649 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,705 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 9,438 in agricultural operations; 3,166 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 4,393 persons returned as labourers and 426 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 214 as landholders, 30,735 as cultivators, and 38,624 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 682 males as able to read and write out of a total male population numbering 36,442 souls.

History.

Mína Meos formerly held this parganah, and were succeeded by Badgújars, who, under Raja Partáp Singh, were permitted by the Dors to occupy the villages of the Meos in the twelfth century. In the *Ain-i-Akbari* the parganah was known as Malakpur, a name it retained until about the middle of this century. It formed a portion of dastúr Thána Farída in sirkár Koil and súbah Dehli. In the reign of Jahángír, Ani Rái, son of Bir Naráyan and a descendant of Partáp Singh, thoroughly expelled the Meos, and obtained a *chaurási* (84) of villages on both sides of the Ganges which he tenanted by Badgújars of his own class. The manner in which these estates passed out of the hands of their proprietors is noticed in the history of the old families of the district (page 63). The Malakpur estate now comprises 32 villages, of which 21 are in this parganah. The remaining 20 villagesb elong to proprietors of various castes. Anúpshahr belonged to the ceded provinces, and was first included in Moradabad, and subsequently, in 1805, in Aligarh. In 1817 it was transferred to Meerut, and in 1824 it formed a portion of the new district of Bulandshahr. At that time the parganah contained 86 villages, but at the revision of boundaries in 1844 A.D. the number was increased to 106.

ANÚPSHAHR, a tahsíl in the Bulandshahr district, comprises the parganahs of Anúpshahr, Ahár, and Dibái. The total area, according to the census of 1872, contains 448 square miles, of which 330 square miles are cultivated. The area assessed to Government revenue is given at 445 square miles, of which 327 square miles are cultivated, 57 square miles are culturable, and 61 square miles are barren. The land-revenue during the same year stood at Rs. 2,93,523 (or with cesses Rs. 3,23,084), falling at Re. 1-0-5 per acre on the total area, Re. 1-0-6 per acre on the area assessed to Government revenue, and Re 1-6-3 on the cultivated area. The population numbered 213,678 souls (101,678 females) giving 477 to the square mile, distributed amongst 401 villages. The same statistics show 14 insane persons, 2 idiots, 26 deaf and dumb 530 blind, and 72 lepers in the tahsíl. This tahsíl comprises the eastern parganahs of the

district lying along the Ganges. All other particulars will be found under the parganah and district notices.

ARNIYA, a village in parganah Khúrja, is distant 21 miles from Bulandshahr. The population in 1872 numbered 654 souls. There is a police-station here.

ATA ASÁWAR, in parganah Agauta, is distant 18 miles from Bulandshahr. It really comprises two villages Ata, with a population of 583, and Asáwar, with a population of 440. These villages were confiscated for the rebellion of their Gújar owners in 1857, and were conferred upon Ratan Singh and Gopál Singh. The land-revenue, assessed at Rs. 1,355, has been remitted for two generations. Two separate estates have been formed, and each will become liable to the payment of its revenue on the death of the present incumbent and his son.

AURANGABAD CHANDOKH, an old village in parganah Shikárpur of the Bulandshahr district, is distant 15 miles east from Bulandshahr. The population in 1872 numbered only 1,860 souls. It possesses a Hindi village school. Kunwar Lachhman Singh notices it on account of its antiquities. According to him the town was, in ancient days, the capital and residence of the famous Hindú Raja Chand, the hero of many popular songs and legends, and was called Abhá Nagari or Chandokh. The ruins of the ancient city are still visible. The ancient history of the town has furnished a common and well-known proverb which still is current among the rural population of this district. The proverb is contained in a stanza of a poem setting forth the sorrows and sufferings of Raja Chand and runs as follows:—"*Káli bhali na svet, máro donon ekhi khet*"—"The black and white are bad alike; on one spot both were best to strike." Chand was plagued with two wives. He consulted one as to how he had best get rid of the other. The favoured one then gave him the following advice:—"I," said she, "will transform myself into a white kite and prevail upon my rival in your affections to transform herself into a black kite; we will both fly towards you, and when we come within range do you shoot the black kite." The Raja agreed, but when the ladies had changed themselves into kites and came flying towards him, he prudently resolved to "kill the two birds with one arrow," and did so, uttering, as he shot, the above stanza, which has passed into a favourite proverb. After the tragical death of his wives Chand betook himself to the forests, and made over his kingdom to the priests. The ruins of the temple where the queen performed her sorceries are still pointed out under the name of Chandráni-ke-mandir. In Alamgír's reign the Badgújar Rajpúts got possession of this town, and called it Aurangabad in honour of the emperor, by whose permission they ousted the former proprietors.

AURANGABAD SAYYID, a village in parganah Baran of the Bulandshahr district, lies ten miles north-east of the civil station The population in 1865 was 4,917, and in 1872 there were 4,833 inhabitants and 1,220 houses. There

a post-office, encamping-ground, village school, and a market on Fridays. An *urs* (or religious fair) is held at the tomb of the Sayyid founder. The Chaukidári Act (XX. of 1856) is in force, and in 1872-73 supported a village police numbering 16 men of all grades, at a cost of Rs. 882 per annum. This charge is defrayed from a house-tax, which during the same year yielded a revenue of Rs. 1,742, falling at Re. 0-5-9 per head of the population and Re. 1-6-10 per house assessed (903). The expenditure amounted to Rs. 1,773, chiefly in wages and small sanitary improvements. In the year 1704 A.D., one Sayyid Abdul Azíz, a descendant of Sayyid Jalál-ud-dín Husain of Bukhára, undertook, with the permission of Aurangzíb, to oust the turbulent Jaroliyas of the neighbourhood, and was successful in the attempt. He took up his quarters in the village of Dhárka, which he improved and enlarged under its present name in honour of his patron. The proprietors of the lands attached to the town are the descendants of the above named Sayyid. They are owners of fifteen other villages in the district, and though very improvident, are a very influential class. The site of the town is rather low and surrounded on three sides with large tanks, which join in the rainy season and render the town inaccessible except in one direction. The health of the residents is much affected by these water reservoirs, which form a fertile source of malaria. Attempts have several times been made to cut a drain towards the Káli Nadi, but the expense has, hitherto, proved too formidable.

BAGRÁSI, a town of parganah Sayána and tahsíli Baran in the Bulandshahr district, lies 22 miles north-east of Bulandshahr. The population in 1865 was 4,153, and in 1872 was 4,640, chiefly Patháns. There is a halkahbandi or village school, and a market on Saturdays and Tuesdays. This town is said to have been founded by one Bágu Rao, a Taga Brahman. Its proprietorship was usurped from the Tagas by the Afgháns during the rule of the Lodi dynasty, and is still held by the descendants of the usurpers. It is one of the Bárah Basti, or twelve towns of the Patháns. Some of the present proprietors call themselves of the Súr clan, the same to which Sher Sháh belonged. Their distinguishing feature is that their complexion is as fair as that of the fresh emigrants from Yusafzai, and they take great care that connection by marriage may not be made with the dark complexioned Patháns. They remained loyal in the mutiny. The Patháns of Bagrási fill many respectable posts, both civil and military, under the British Government as well as in Native States. The town is famous for its numerous mango topes, and has the Ganges running at about five miles to the east.

BARAL, a good sized village in parganah Agauta, is distant 7 miles from Bulandshahr. The population of Baral in 1872 numbered 2,389 souls. There is a police-station in the village.

BARAN, a parganah in tahsíl Bulandshahr of the Bulandshahr district, is surrounded on all sides by other parganahs of the same district. In 1872

the total area by the census returns amounted to 140 square miles, of which 99 square miles were under cultivation. The area assessed to Government revenue during the same year was 137 square miles, of which 96 square miles were cultivated, 18 square miles were culturable, and 23 square miles were barren.

General appearance.

The Káli Nadi enters the parganah near Málágarh and flows south-easterly until it reaches Bulandshahr, whence it again inclines to the east, and becoming very tortuous passes out through Murtazabad Batwára. Here, too, much damage has been done to all the lands lying in its bed: upwards of fifteen villages have been found entitled to remission of revenue from the inundations caused by its use as a canal escape, and lands that formerly bore wheat, barley, and grain now bear nothing. The greater part of the parganah to the east of the Káli lies beyond the reach of canal irrigation, though requiring it more than the western portion, which always had considerable well-irrigation, now superseded by the canal. In the villages in the north-east corner beyond Sarái Chabíla there is an uncultivated tract interspersed with *dhák* jungle and low marsh lands which contain some fair culturable waste. The soil here is chiefly *bhúr* and *pilota*, which form 8½ per cent. of the cultivated area; in the rest of the parganah it is very fair *seota*. Orchards of mango, *jámun* and *ber* are frequent, especially in the western portions of the parganah. Wheat cultivation occupies twenty per cent. of the cultivated area, and indigo and cotton each ten per cent. The principal roads are the Grand Trunk Road and metalled roads to Anúpshahr, Chola Railway Station, *viâ* Máman, and the Grand Trunk Road to Khúrja and to Sikandarabad. There are also numerous raised *kuchcha* or earthen roads. The principal towns are Baran or Bulandshahr and Aurangabad. Hátimabad was confiscated for the rebellion of the Shaikhs and given to Mr. P. Saunders. Sayyid Amjad Ali and Faiz Ali Khán also hold villages in reward for services during the mutiny. Twenty villages belonging to Walidád Khán and seven belonging to Abdúl Latíf Khán in this parganah were confiscated and disposed of. Twenty-one villages belong to the Kuchchesar estate, seven to Bilúches, the same number to Patháns, six to Shaikhs, and seven to Jhojhas. The Lálkháni family of Badgújars own eleven villages, and the remainder are distributed amongst various castes. The Hindú cultivators are principally Rajpúts, Jádons, Játs, Brahmans, Lodhas, Gújars, and Chamárs, and are almost treble the number of Musalmáns.

Fiscal history.

The assessment at the settlement under Regulation IX. of 1833 was a light and equable one, for there are no instances of very glaring inequality, undue lightness or severity. It was easily collected, and there were no sales for arrears of revenue, and but one farm for that purpose, the Gújar village of Aurangpur Mirpur. The alienation statement shows

that there were 46 entire villages and portions of 37 others transferred by mutual arrangement, whilst the civil courts ordered the transfer of one entire village and shares in 24 others. The shares are small and in no case show any pressure in the Government demand. Twelve Pathán villages were mortgaged owing to the extravagance of the successor of Yahya Khán of Korala, and the remaining transfers are due to the acquisitive spirit of the great landholders who vied with each other in laying baits for getting a footing in the villages. Out of 161 estates in the parganah, in 1865, 134 were zamíndári, 13 were pattidári, and 14 were bháyachára. There were 544 holdings cultivated by proprietors, 683 by hereditary cultivators, and 5,173 by tenants-at-will. The new assessment was made by Mr. C. Currie in 1859, and the following statement shows the statistics connected with both the past and present settlements and those collected at the revision in 1871; the expiring revenue of the past settlement is given:—

Settlement.	Total area.	Barren and unassessable.	Culturable.	*Cultivated.*			Revenue with cesses.	*Incidence of revenue and cesses on*							
				Irrigated.	Dry.	Total.		Total area.			Entire culturable area.			Cultivated area.	
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	a	p.	Rs.	a.	p.	Rs.	a. p.
Past, ...	87,640	10,873	24,320	16,354	36,093	52,447	94 545	1	1	3	1	3	8	1	12 10
New, ...	89,566	18,902	12,847	27,668	30,149	57,817	1,10,861	1	3	10	1	9	1	1	14 9
1871, ...	89,567	18,893	12,551	27,966	30,159	58,123	1,19,312	1	5	6	1	11	0	2	0 10

The land-revenue for 1872, according to the census returns, amounted to Rs. 1,08,465 (or with cesses Rs. 1,19,704), falling at a rate of Re. 1-3-4 per British acre on the total area, at Re. 1-3-10 per acre on the area assessed to Government revenue, and at Re. 1-11-5 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 2,96,156.

Population.

According to the census of 1872, parganah Baran contained 143 inhabited sites, of which 30 had less than 200 inhabitants, 55 had between 200 and 500, 41 had between 500 and 1,000, 14 had between 1,000 and 2,000, one had between 2,000 and 3,000, and one had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Bulandshahr, with 14,804 souls. The settlement records show that in 1865 there were 141 villages on the register, distributed amongst 161 maháls or estates. The total population in 1872 numbered 90,230 souls (45,028 females), giving 644 to the square mile. Classified according to religion, there were 60,822 Hindús, of whom 28,454 were females; 29,395 Musalmáns, amongst whom 14,574 were females; and there were 13 Christians. Distributing the Hindu population amongst the four great classes, the census shows 6,189 Brahmans, of whom 2,851 were females; 6,127

Rajpúts, including 2,831 females; 4,830 Baniyas (2,263 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 43,676 souls, of whom 20,509 are females. The principal Brahman subdivisions found in this parganah are the Gaur (5,695), Kanaujiya, and Bohra. The chief Rajpút clans are the Panwár (628), Badgújar (184), Chauhán (47), Jádon (3,248), Bais (137), Bhala Sultán, Jaiswár, Gaur, Tonwár, Surajbansi, Jairaniya, Bargala, Barkohi, and Dángar. The Baniyas belong to the Agarwál (2,464), Dasa (341), and Baranwál (102) subdivisions. The most numerous amongst the other castes are the Lodha (8,310), Kahár (1,643), Ját (4,472), Hajjám (1,000), Chamár (12,300), Khákrob (2,946), Garariya (1,106), Kumhár (1,084), Máli (1,136), Gújar (1,896); and next to them with less than 1,000 members are the Darzi, Kalál, Barhai, Khatík, Dhobi, Ahír, Koli, Sonár, Gosháin, Jogi, Dhúna, Bhát, Káyath, Bharbhúnja, Bairági, Chhípi, Aheriya, Taga, Orh, Joshi, Kanjar, Khattri, Meo, and Miumár. The Musalmáns are distributed amongst Shaikhs (4,088), Sayyids (980), Mughals (768), Patháns (1,808), converted Hindús (1,570), and the remainder are without distinction.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 344 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 4,641 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,859 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 11,775 in agricultural operations; 4,346 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 4,585 persons returned as labourers and 583 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 1,498 as landholders, 36,255 as cultivators, and 52,477 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 2,559 males as able to read and write out of a total male population numbering 47,202 souls.

History.

Baran has been almost from time immemorial the head-quarters of the neighbouring country. During the Hindu *ráj*, it was a Raja's residence, and Akbar made it the head-quarters of a dastúr attached to sirkár and súbah Dehli. In 1803 the parganah contained 154 villages and hamlets. The hamlets were absorbed in the parent villages, and the parganah, consisting of 151 villages, was transferred to Meerut, then known as the southern division of Saháranpur. On the formation of the present district, in 1824, Baran again became a capital, and the number of villages has since then remained at 141.

BARAN, a tahsíl of the Bulandshahr district, comprises the parganahs of Baran, Agauta, Sayána, and Shikárpur. The total area, according to the census of 1872, contains 478 square miles, of which 346 square miles are cultivated. The area assessed to Government revenue is given at 463 square miles, of which 334 square miles are cultivated, 58 square miles are culturable, and 71 square miles are barren. The land-revenue during the same year stood at Rs. 3,53,466 (or with cesses Rs. 3,,0,339) falling at Re. 1-2-6 per acre on the total area, Rs. 1-3-1 per acre on the area assessed to Government revenue, and Re. 1-9-6 on the cultivated area. The population numbered 264,365 souls (125,900 females), giving 553 to the square mile, distributed amongst 400 villages. The same statistics show 704 persons blind, 116 lepers, 35 deaf and dumb, 14 idiots, and 28 insane persons in the tahsíl. This tahsíl, also known as the Huzúr or headquarters tahsíl, comprises the central parganahs of the district. All other information concerning it will be found under the parganah and district notices.

BELAUN or Belon, a large village of parganah Dibái and tahsíl Anúpshahr of the Bulandshahr district, lies 5 miles to the east of Dibái and 34 miles south-east of the civil station on the road between Rámghát and Dibái. The population in 1865 was 1,347, and in 1872 was 1,515. There is a halkabandi or village school here. The village was founded about 150 years ago, by Raja Bhúp Singh, Badgújar, who erected a temple in honour of Bela Devi in a grove of *bel* trees, and established a colony of Sanádh Brahmans as *pandas* here. These men are very wealthy and receive about Rs. 10,000 a year in offerings to Bela Devi, which are not shared in by the Badgújar zamíndárs, who are sixth in descent from the founder. The fairs are held in Chait (March) and in Kuár (September), and are attended by about 5,000 people.

BHAWAN BAHADUR NAGAR, a village of parganah Sayána and tahsíl Baran of the Bulandshahr district, lies 5 miles west of Sayána and 16 miles north of the civil station. The population in 1865 was 3,301, and in 1872 was 3,306. It was founded by a Dor Rajpút during the rule of that dynasty, but about 1104 A.D. the Dors were supplanted by one Bhojráj Taga, from whose descendants the proprietary right was purchased in 1761 A.D. by the Kuchchesar talukadár. There is a school and a fine masonry haveli here.

BHÚR, a village in parganah Baran, is distant two miles from Bulandshahr. The population in 1872 numbered 815 souls. Bhúr is a halting-place for troops on the route from Aligarh to Meerut, distant 11⅞ miles from Khúrja, and 11¾ miles from Galáothi. The road is metalled and bridged throughout, and from Khúrja passes Agwál at 2½ miles, Bartauli at 4½, Dhamrauli at 5¾, Sunahra at 9, and Chandpur at 10 miles. The town of Bulandshahr is about 1¾ miles to the east. Hence to Galáothi the road passes Akbarpur and Karnilpur within the first mile, Baral at 5¼, Harchana at 7, Chhapráwat at 8,

Charáwak at 9, and Bhamra at 10¼. To Anúpshahr the route would be by the metalled road to Jatwái, 12 miles, and thence to Anúpshahr, 13 miles. Jatwái is a small village where supplies must be collected beforehand. There is a police-station here.

BILÁSPUR, a large village of parganah Dankaur of the Bulandshahr district, lies sixteen miles south-west of the civil station and two miles to the south of the Railway Station of Sikandarabad, with which it is connected by a metalled road. The population in 1865 was 3,029, and in 1872 was 2,732. There is a post-office, a school and a market on Saturdays. The town is merely remarkable as being the head-quarters of the Skinner family and estate, founded by Colonel James Skinner, C B. A handsome house and fine garden are kept up here, and the family mansion, a strong mud fort, is about two hundred yards outside the village. The heirs of Colonel Robert Skinner have also two villages in parganah Dankaur. Mr. R. Currie settled the Skinner jágírs in 1864, and wherever the jágírdárs were not found to be also proprietors a sub-settlement was made with the actual proprietors. His proceedings were submitted to the Board of Revenue and were sanctioned (No. 557 of 4th November, 1864) as the jágírdárs are merely assignees of the Government land-revenue. Tappa Rabupura, a *taiúl sháhi* grant of 22 villages set apart for the King of Dehli's privy purse, was leased by the King of Dehli to Colonel Skinner about 1835 at a fixed annual payment of Rs. 16,000. Previous to the mutiny the subordinate tenures were examined into, but the papers were then destroyed, and after the mutiny the estate was confiscated, and wherever no one could prove a proprietary right, this was conferred on the Skinner family. In villages where a sub-proprietary title was awarded to other than the Skinner family, a talukadári allowance of ten per cent. on the net land-revenue was assigned to the Skinner family in accordance with the orders of Government (No. 1496A. of 15th December, 1864). Mr. T. Skinner held the fort of Biláspur during the mutiny. And owing to the bad management of his son all Mr. T. Skinner's estates are now under the Court of Wards.

BORA, in parganah Sikandarabad, is ten miles from Bulandshahr, and has a population of only 100 souls. There is an outpost of police here.

BOSTAN, a village in parganah Dádri of the Bulandshahr district, lies in latitude 28°-31′-0″ and longitude 77°-33-′0″, at an elevation of 758·1 feet above the level of the sea. The upper markstone of the Great Trigonometrical Survey stands on the high bank which bounds the bed of the Jumna to the east. To the north-west of the station is the village of Garabpur, distant about 3·9 miles, and Dádri, north-east, 3·5 miles. This height is deduced trigonometrically.

BULANDSHAHR, called also Baran, the head-quarters of the district of the same name, is situated on the right bank of the Káli Nadi in north latitude 28°-24′-16″ and east longitude 77°-54′-13″, at an elevation of 741·15 feet

above the level of the sea.[1] The population of Baran in 1847 numbered 12,409 souls; in 1853 the numbers were 15,005, and in 1865 there were 15,284 inhabitants. The census of 1872 shows a total population of 14,804, of whom 7,897 were Hindús (3,631 females), 6,894 were Musalmáns (3,443 females), and 13 were Christians. Distributing the population amongst the urban and rural classes proper, the returns show 180 landholders, 716 cultivators, and 13,908 persons following callings unconnected with agriculture. The number of enclosures in 1872 was 1,690, of which 911 were occupied by Musalmáns. The number of houses during the same year was 3,020, of which 902 were built with skilled labour, and of these 400 were occupied by Musalmáns. Of the 2,118 mud huts in the town, 911 were owned by Musalmáns and 2 by Christians. Taking the male adult population (not less than fifteen years of age), we find the following occupations pursued by more than fifty males:—Barbers, 95; beggars, 70; bricklayers, 61; butchers, 140; carpenters, 59; cultivators, 330; inn-keepers, 51; labourers, 683; landowners, 71; milk-sellers, 70; petty dealers, 69; servants, 1,222; shop-keepers, 384; sweepers, 129; tailors, 54; water-carriers, 74; and weavers, 607. Notwithstanding the great efforts made to spread education amongst the peopls, the same returns show only 868 males out of the whole population as able to read and write. The area of the town site is 111 square acres, giving 133 souls to the acre.

Population.

The oldest and most prominent families of Bulandshahar are the Baranwál Baniyas, who claim direct descent from Raja Abibaran, the founder of the town, and who are now found all over India. The office of kanúngo has been until lately hereditary in their family. One of them, Sítal Dás, kanúngo, mentioned below, immortalized himself by founding a *ganj* in the city and calling it by his name. The Chaudhris, called also Tantas, are the descendants of one of the men who in the time of Chandrasen opened the gates of the fort to Muhammad Ghori. For this service he was rewarded by the conqueror with the Chaudhriship of the parganah, and, on his becoming a Musalmán, with the title of Málik Muhammad. These Chaudhris have a bad reputation for irascibility, and have shown themselves to be dangerous and untrustworthy on more than one occasion. True to their blood they are said to have opened the gates of the upper town to the Sikhs in 1780, and during the disturbances of 1857 to have been the first to plunder the bazar. The Kázis of the town are the descendants of Núr-ud-dín Ghazanwal, who came with Muhammad Ghori, and was left by him as governor of Baran. The Kázis are still held in good repute. Baran is noted as the birthplace of the historian

Principal families.

[1] This gives the height of the upper mark-stone of the Great Trigonometrical Survey, which is 14 feet above the ground level mark-stone, and is on the vaulted roof of an old mosque, upon the highest part of an elevated mound within the town. The height is deduced from the spirit-levelling operations of the Survey.

Ziá-ud-dín, who wrote the *Tárikh-i-Firúz Sháhi*,[1] continuing the *Tabakát-i-Náṣiri* of Minháj Siráj, and giving an account of the reigns from Ghiyás-ud-din Balban to Firúz Sháh. His work, though marred by his adulation of the reigning house and his inaccuracy in his dates, is very useful. He died in poor circumstances in a village near Dehli, where his remains found a resting-place near his friend Amír Khusru.

The site.

The Káli Nadi skirts the town on the east and south. The old town stood on a raised bank of some extent bordering on the *khádir* of the river, but the new town has extended more to the westward, so that now the town of Baran is partly on level land and partly on raised ground. To the north of the town the Káli is crossed by a bridge on the Anúpshahr and Sikandarabad road, and from the foot of this bridge the two principal entrance-ways start for the town, the one leading straight up to the higher town, or Balái Kot, and the other to the portion of the town built on the level, and known as Zer Kot, or lower town. The two roads meet again outside the town to the south-west, to form the road to Khúrja. These roads with the *chauk* road form the principal bazarways of the town. The lower is the most important for traffic, and contains some of the best shops and the residences of the more wealthy merchants. The upper road leads by a gentle slope to the tahsíli, and beyond it to a large bazar known as Sapte's Bazar, which is but little used. All the roads are well metalled and drained by saucer drains. From the lower road two ways lead up to the Balái Kot,—one to the tahsíli, and the other by steps to the tahsíli schoolhouse. From the civil station the approach to the city is through the chauk, also a central place of business lined with fair shops. To the north, on the Anúpshahr road, lies Deputyganj, built in 1848 A.D. by Mr. T. Tonnochy, for many years Deputy Collector of Bulandshahr. It consists of a wide open space used as the grain market of the town and is lined by shops. The drainage falls towards the Káli, and much money has been expended in the construction of kunkur and brick-made drains.

The Zer Kot drainage first collects in the Ganda Nála, which has, in recent years, been greatly improved and straightened, and is now a fairly well kept waterway, but nothing has been done to give it a permanent bed of perfect slope. The wells of the Balái Kot are brackish, and the tahsíli one, though having a depth of 90 feet from the surface, is bad. The wells in the Zer Kot are good, but the water in them has risen, since the introduction of canal irrigation, from 24 feet to 12 and 14 feet. Although the water is sweet, yet the people say that its character has changed, and it is now heavy and hard of digestion. There is a good deal of irrigation from canals around the town. Spleen enlargement is well known, and fever prevails in the autumn and rainy seasons, both of

[1] The *Tárikh-i-Firúz Sháhi* is abstracted in Dowson's Elliot's History of India, III., 67. Local tradition makes Baran the burial-place of Barani, but, as usual, it is incorrect.

which may be due to the swampy character of the *khádir* of the Káli here. From the Balái Kot the *khádir* presents the appearance of a remarkable wide tract of moist land, containing many pools and collections of shallow water in addition to the stream itself. This excessive moisture is due to the use of the Nadi as a canal escape, and much complaint is made of the destruction of cultivation in the *khádir*, which before was so famous for the excellency of its crops. The efflorescence of *reh* also is another mark of over-saturation. Some efforts have recently been made, and with good effect, to widen and deepen the channel of the river, not only for its present uses, but in order to make it serve as a canal escape at various points. The mere removal of the accumulated river weed from the river-bed has already lowered the water-level by a foot.

Public institutions.

The principal muhallas are the Balái Kot, or upper town, which contains about half the total number of inhabitants; the Zer Kot, or lower town; Tonnochyganj, sometimes called Deputyganj; Brahmanpuri, or Brahmans' quarter; Sítalganj, built by Kánúngo Sital Dás about 1830; and Shaikh Sarái, founded by Shaikh Roshan, kanúngo, during the reign of Alamgír. The civil station is situated in the immediate neighbourhood of the town westward, and between it and the town are the dispensary, schoolhouse, and jail. At the commencement of the British rule Bulandshahr was a small and poor town, inhabited chiefly by Lodhas and Chamárs, who dwelt in mud hovels in the lower portion. In the upper part there were a few fine houses, but they were thinly (if at all) occupied. Mr. Robert Lowther, the first Collector of Bulandshahr, deserves the credit of having raised the town to something approaching its present eminence. During his administration, lasting eight years, he by tact and courtesy prevailed upon the inhabitants of the neighbouring hamlets to take up their abode in the town, and thus succeeded in transforming the place from a second-rate village into a moderately populated and flourishing town. Most of the present buildings are due to the energy and taste of Messrs. G. D. Turnbull, C. Currie, and H. D. Webster, successively Collectors of the district. The principal public buildings are the Magistrate and Collector's offices, the Sessions Courthouse and Judges' Chambers for the accommodation of the Judge of Meerut, who holds quarter sessions here for the trial of criminal cases; the Ganges Canal office and the District Jail.

The tahsíli on the Balái Kot was built in 1866-67, at a cost of Rs. 14,187. The tahsíli school was built in 1863-64, at a cost of Rs. 1,364, and the zila school was built in 1864, at a cost of Rs. 3,650. The dispensary was built in 1867, at a cost of Rs. 11,682, which was recovered from the zamíndárs on account of famine relief advances. The dispensary is maintained principally by private subscriptions. The post-office was built in 1867, and the *dharmsala* in 1861-62 from the sale proceeds of confiscated arms. Connected with the civil station are the racquet-court and billiard-room which adjoin each other. Close by is the

Church of All Saints, erected in 1864, at a cost of Rs. 5,750, one-half of which was contributed by Government. There is no chaplain, but the Church of England Mission has a station here. The Lowe Memorial building is a handsome edifice erected close to the Magistrate's office with the intention of affording shelter from rain and sun to suitors and others obliged to attend the several courts. This building bears the following inscription :—"This building has been erected by the European and Native Official and Non-official residents of the station and district as a token of their respect and esteem, and as a memorial of the late William Henry Lowe, Esquire, who died, while Collector of this district, on the 30th of July, 1862 A.D." A public garden and nursery is maintained in the civil lines, and a model cotton farm existed until 1875 in the immediate vicinity of the town.

Municipality.

The municipality was established in 1866, and is managed by a committee consisting of five official members and ten members chosen by election. The average income for some years amounts to Rs. 10,000 derived from an octroi duty and a house-tax. The incidence of the octroi in 1872-73 was Re. 0-9-9 per head of the population. The following tables show the municipal statistics:—

Receipts.	1870-71.	1871-72.	1872-73.	Expenditure.	1870-71.	1871-72.	1872-73.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Opening Balance, ...	154	2,806	1,127				
Class I. Food and drink,	4,693	4,4 6	4,407	Collection, ...	1,132	1,293	1,295
„ II. Animals for slaughter, ...	63	101	137	Head-office, ...	120	126	141
„ III. Fuel, &c., ...	113	262	305	*a*. Original works,	915	2,932	3,624
„ IV. Building materials, ...	378	532	540	*b*. Supervision, ...	...	...	84
„ V. Drugs, spices,	236	315	352	*c*. Repairs, &c., ...	467	2,697	1,737
„ VI. Tobacco, ...	...	86	68	Police, ...	2,508	2,508	2,495
„ VII. Textile fabrics,	...	691	761	Education, ...	72	442	411
„ VIII. Metals, ...	...	173	142	Conservancy, ...	1,764	1,479	1,088
Total of octroi, ...	5,*83	6,586	6,712	Charitable grants,	160	220	255
Tax of buildings, &c., ...	2,394	2,406	2,388	Watering roads,...	184	267	195
Rents, ...	264	333	830	Refunds, ...	...	47	35
Extraordinary, ...	1,721	44	170	Pounds, ...	...	87	...
Fines, ...	76	67	95	Miscellaneous, ...	140	48	31
Pounds, ...	...	744	228				
Miscellaneous, ...	177	287	32				
Total, ...	10,269	13,273	11,677	Total, ...	7,462	12,146	11,391

Articles.	Quantity imported in 1871-72.	Quantity imported in 1872-73.	Consumption per head in 1871-72 and 1872-73.		Article.	Value imported in 1872-73.	Value imported in 1873-74.
	Maunds.	Maunds.	1871-72. Md. s. c.	1872-73. Md. s. c.		Rs.	Rs.
Wheat, ...	38,633	38,551	7 2 8	6 18 1	Fruits, ...	5,483	4,886
Barley, ...	27,830	19,395			Fodder, ...	7,016	4,508
Other grains,...	30,479	30,497			Ghi, ...	26,167	25,639
Rice, ..	7,652	7,197			Gúr, ...	18,332	21,604
Vegetables, ...	1,501	2,747	...	...	Shira, ...	2,599	2,082
Oil-seeds, ...	...	6,575	0 14 1	0 17 1	Khand, ...	18,174	21,981
					Sugar, ...	15,507	13,834
	Value. Rs.	Value. Rs.			Pán and water-nuts,	4,212	3,503
Fuel, ...	3,087	2,845			Oil, ...	2,582	2,916
Building materials.	15,409	17,272			Oil-seeds, ...	5,210	...
					Cloth, ...	72,490	78,830
Drugs and spices,	10,091	11,262			Metals, ...	26,224	15,887
Tobacco, ...	2,762	2,194			Animals, head,	4,106	4,446

A market is held every Saturday in the Balái Kot and on Tuesdays in the Zer Kot, but there are no distinct local manufactures except that of dyed country cloth for the use of the poorer classes.

History.

Baran is a place of some antiquity, and even to the present day coins of Alexander the Great and the Indo-Bactrian Kings of Upper India are found in and around the town. The late Mr. G. Freeling collected a large number. Its early history is given in the history of the district (page 82). First called Banchati, it subsequently received the name of Baran from Raja Ahibaran, and again from its position the name of Unchhanagar, which has been Persianised into the form Bulandshahr, or "high town." Hardatta, Dor, who ruled here at the time of Mahmud's invasion of India, bought off the conqueror by large presents, or, as some say by his apostacy to Islám. The last Hindú Raja was Chandrasen, Dor, who gallantly defended his fort against Muhammad Ghori. With his own hand he slew Khwájah Lál Ali, one of the principal officers of the invading army, whose tomb still stands about 900 yards to the east of the town. But his valour was of no avail, since two of the Raja's own servants opened the gates to the enemy. The Raja was himself killed in the defence. In Akbar's time Baran was the capital of a dastúr belonging to the sirkár and súbah of Dehli. The mahal or parganah of Baran paid a revenue of 39,07,928 *dáms* a year, or about Rs. 1,95,396.

Among the principal ancient remains near the town is the tomb of Khwájah Lál Ali mentioned above, bearing an Arabic inscription now undecipherable through age. In the pavement of the same building there is a Sanskrit inscription, but it is so much worn that nothing can be made of it. Near the town is an Idgáh which, though not itself an old building, was evidently

constructed from the débris of one still more ancient, inasmuch as there are in the walls several slabs of stone bearing detached portions of an Arabic inscription. These slabs are much scattered, and until they are put together there is but little hope of getting at the purport of the inscription. One of the stones, however, contains a complete Persian inscription running as follows :—"This Mosque was built in the reign of King Humáyun in the month Rajab, Hijra 943 (1536A.D.) during the administration of the chaste Bánu Begam, by Nekbakht Khán." It is quite evident that this inscription has nothing to do with the Idgáh. The makhbira of Bahlol Khán, a leading officer under Akbar, stands in the suburbs with an inscription running:—"This, the tomb of Bahlol Khán, was built in the reign of Jalál-ud-dín Muhammad Akbar in the year 1005 Hijri (1596 A.D.)" The Jama Masjid is situated on the Balái Kot. The construction of this building was commenced in 1730 A.D. at the instance of Sábit Khan of Koil, who died before its completion, and was finished about 1830 by Kázi Fyáz Ali of Bulandshahr.

The following table shows the rainfall registered by the canal authorities :—

Year.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Total.
1866-67, ...	...	...	1·2	6·5	10·4	3·3	·7	...	...	1·0	1·1	·1	24·3
1867-68, ...	1·7	1·3	1·0	13·2	17·3	·1	2·2	...	1·0	·8	·3	·2	39·1
1868-69, ...	1·4	1·0	1·5	6·6	·2	1·2	...	...	...	1·1	·4	1·2	14·6
1869-70, ...	1·3	...	...	1·6	3·1	5·6	4·1	...	...	·2	...	1·7	17·6
1870-71, ...	·3	·4	6·6	11·7	6·0	4·7	·4	...	·4	...	...	...	30·5
1871-72, ...	...	1·4	3·7	9·1	7·5	4·1	...	...	1·2	·9	...	...	27·9
1872-73, ...	·1	...	2·3	9·7	12·6	2·8	...	...	...	·3	·2	·1	28·1

CHATÁRI (Chhatári) a large in village parganah Pahásu and tahsíl Khúrja of the Bulandshahr district, lies 27 miles south-east of the civil station, 18 miles from Anúpshahr, and 21 miles east of Khúrja on the Aligarh road. The population in 1865 was 3,547, and in 1872 was 3,799 souls. There is a good school and a post-office here. A large cattle market is held on Fridays. A village police numbering six men was entertained at a cost of Rs. 288 in 1873. The Káli Nadi lies about 2½ miles north of the village, which is about 17 miles from Aligarh. Chatári is the residence of Mahmúd Ali Khán, Lálkháni, a respectable Badgújar Musalmán. The mud fort and brick houses comprising Mahmúd Ali Khán's residence look imposing from the road. The name of the village is said to

be derived from the Chhatáradhari clan of Meos who formerly owned the parganah.

CHAUNDERA, a village of parganah Pahásu and tahsíl Khúrja of the Bulandshahr district, lies 28 miles south-east of the civil station. The population in 1865 was 1,754, and in 1872 was 2,302. There is a halkahbandi or village school, and a market on Mondays. The original name was Chámandakhera, given, it is supposed, in honour of the goddess Chámanda by the Badgújar founders of the town, whose head-quarters it has been for many years.

CHHAPRAULA, a village in parganah Dádri, with 503 inhabitants, is distant 28 miles from Bulandshahr. It has a police-station, but is otherwise of no importance.

CHITSAUN, a village in parganah Shikárpur, is distant 7 miles from Bulandshahr. The population in 1872 numbered 1,073 souls. There is a police-station here.

CHOLA, a large-sized village in parganah Sikandarabad, is distant 7 miles from Bulandshahr, and has a population of 1,157 souls. It is a station of the East Indian Railway, and there is a small body of police here. Chola is a stage on the military *route* between Aligarh and Dehli, distant 8½ miles from Khúrja and 10½ miles from Sikandarabad. The road is metalled and bridged throughout. To Sikandarabad it passes by Shahpur, 2 miles; Bodhi, 3¾; Sháhbázpur, 4½, and joins a branch metalled road to the Meerut road near the encamping-ground. The Gangraul (Chola) Railway Station is 3½ miles from the encamping-ground at Chola. From Khúrja the road passes by Muhammadpur, 1½ miles; Jamálpur, 2¾ miles; Dharaon, 4½ miles; and Pachgaon, 5½ miles. The second-class road to Bulandshahr passes through Chola.

DÁDRI, a parganah in tahsíl Sikandarabad of the Bulandshahr district, is bounded on the east and south by parganahs Sikandarabad and Dankaur, on the west by the Jumna, and on the north by the Meerut district. According to the census of 1872 this parganah had, then, a total area of 215 square miles, of which 156 square miles were under cultivation. The area assessed to Government revenue during the same year was 213 square miles, of which 154 square miles were cultivated, 37 square miles were culturable, and 22 square miles were barren.

General appearance.

About two-fifths of the area lie within the *khádir* of the Hindan and Jumna, the remainder comprise the *bángar* or uplands. The best soil is to be found in those villages bordering on the Hindan and subject to renovation by its inundations. The Hindan flows between high banks and has no separate trough of its own. It is very tortuous, and continually alters its channel, so that it cannot be used as a boundary between villages. The banks are so straight and firm as to allow of irrigation by buckets in the same manner as from wells. The confluence of the Hindan

and Jumna takes place in parganah Dankaur close to the border of Dádri, and between these the land rises in places well above the level of the highest floods and becomes light and sandy. The culturable waste in the *khádir* is extensive, and contains much tamarix jungle (*jhão*) and grass in the villages along the Jumna, but in the middle the waste is mostly poor and infected with various kinds of salts. In these and several of the adjacent parganahs of the Meerut district salt used to be extensively manufactured. Below this, along the sides of the Búrhiya Nála, there are large strips of waste producing good thatching grass. The uplands soil is usually good, though along the high banks separating them from the *khádir* there is much white and yellow sand of an inferior quality. A ridge of low sandhills run almost parallel to the Bulandshahr branch canal, which was excavated as one of the famine works in 1860-61, and but for it the mortality must have been greater than that which it reached; as it was, this parganah suffered most severely, and many of the villages were almost deserted. Canal-irrigation has increased very much of late years, and will materially serve to avert similar calamities in future. The Grand Trunk Road to Dehli passes through the centre of the uplands, and the old Dehli road through the *khádir*. The East Indian Railway has a station at Dádri within one mile of the Grand Trunk Road, and cross roads connect it with the principal villages. The principal products are wheat, barley, and grain. There are indigo factories at Khodna Khúrd, Chhola, and Girdharpur Kanarsi. A fair amount of sugar-cane, cotton, and tobacco is also produced. The agricultural population is chiefly made up of Gújars and Rajpúts, with a sprinkling of Brahmans, Ahírs, and Tagas. The principal towns are Dádri, Surajpur, and Járcha.

Fiscal history.

There are eight *jáyír* villages in the parganah; five belong to Sauta Bái, one to the Skinner estate, and two are mere revenue-free villages. During the currency of the past settlement six whole villages and a portion of a seventh village were sold, and eleven villages were farmed on account of arrears of revenue. Mr. Currie does not think that this was, in any way, due to the pressure of the assessment. The proprietors were chiefly Gújars of the usual reckless type, and the cause was heavy floods in the Jumna. The difficulty in paying the revenue has been due to pure obstinacy and unwillingness, and these villages were probably treated thus as a warning to the Gújar proprietors. The alienation statement shows that 12 whole villages and 25 portions of villages changed hands by mutual agreement, while 13 whole villages and 39 portions of villages were transferred by orders of the civil court. Here also Gújars and Rajpúts were the principal losers. Out of the 201 estates in the parganah, 100 are zamíndári, 33 are pattidári, and 68 are bháyachára; 3,290 holdings are cultivated by proprietors, 3,472 by hereditary cultivators, and 5,542 by tenants-at-will. The new assessment was made by Mr. R. Currie in 1863-64. The following statement gives the statistics of the past

and present settlements and those collected at the revision in 1871; the expiring revenue of the past settlement is given:—

Settlement.	Total area.	Barren and unassessable.	Culturable.	Cultivated.			Revenue with cesses.	Incidence of revenue and cesses on		
				Irrigated.	Dry.	Total.		Total area.	Entire culturable area.	Cultivated area.
	Acres.	Acres.	Acres.	Acres.	Acres	Acres.	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Past, ...	135,794	17,627	52,010	15 498	50,659	66,157	1,10,062	0 12 11	0 14 10	1 10 7
New, ...	138,470	19,058	33,116	37,054	49,242	86,296	1,26,396	0 14 7	1 0 11	1 7 5
1871, ...	138,494	15,604	34,094	37,949	50,847	88,796	1,40,539	1 0 3	1 2 3	1 9 4

The land-revenue for 1872, according to the census returns, amounted to Rs. 1,27,763 (or with cesses Rs. 1,40,679), falling at a rate of Re. 0-14-10 per British acre on the total area, at Re. 0-15-0 per acre on the area assessed to Government revenue, and at Re. 1-4-6 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 2,93,458.

Population.

According to the census of 1872, parganah Dádri contained 162 inhabited sites, of which 36 had less than 200 inhabitants, 60 had between 200 and 500, 49 had between 500 and 1,000, 11 had between 1,000 and 2,000, 5 had between 2,000 and 3,000, and one had between 3,000 and 5,000. The settlement records show that, in 1865, there were 178 villages, distributed amonst 201 maháls or estates. The total population, in 1872, numbered 88,207 souls (40,716 females), giving 410 to the square mile. Classified according to religion, there were 75,667 Hindús, of whom 34,659 were females; 12,531 Musalmáns, amongst whom 6,052 were females; and there were 9 Christians. Distributing the Hindu population amongst the four great classes, the census shows 8,684 Brahmans, of whom 4,081 were females; 7,343 Rajpúts, including 3,367 females; 3,494 Baniyas (1,594 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 56,146 souls, of whom 25,617 are females. The principal Brahman subdivisions found in this parganah are the Gaur (7,954), Bhát, and Acháraj. The chief Rajpút clans are the Chauhán (2,944), Badgújar (247), Panwár (75), Bais (778), Jádon, Gahlot, Tonwar, and Galái. The Baniyas belong to the Agarwál (3,203), Dasa (159), and Saraugi subdivisions. The most numerous of the other castes are the Ját (1,543), Hajjám (1,557), Chamár (14,033), Khákrob (4,313), Ahír (2,456), Gararíya (1,273), Koli (1,887), Kumhár (1,927), and the characteristic Gújar population numbered 22,154 souls in 1872. Besides the castes above mentioned, the following

occur with less than one thousand members each:—Lodha, Darzi, Kahár, Barhai, Khatík, Dhobi, Lohár, Sonár, Gosháin, Jogi, Dhúna, Bhát, Káyath, Bharbhúnja, Bairági, Máli, Chhípi, Taga, Orh, Joshi, Teli, Nat, and Manihár. The Musalmáns are distributed amongst Shaikhs (1,263), Sayyids (1,852), Pathán (323), converted Hindús (214), and the remainder are entered without distinction.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 316 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 2,553 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,502 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 18,022 in agricultural operations; 3,146 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,701 persons returned as labourers and 541 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 1,238 as landholders, 52,553 as cultivators, and 34,416 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,341 males as able to read and write out of a total male population numbering 47,491 souls.

History.

This parganah did not exist in Akbar's time, and has been made up of villages belonging to the extinct parganahs of Shakrpur, Tilbegampur, and Kásna, and also to parganah Dásna of the Meerut district and Sikandarabad of this district. Sháh Alam gave 132 villages with Dádri to Dargáhi Singh, and named them tappa Dádri. (See DÁDRI.) These were annexed to Meerut in 1804, and in 1824 were transferred intact to Bulandshahr. In 1844 the absorption of parganah Shakrpur raised the number of villages to 183. In 1850, the villages, to the number of 37, lying between the Hindan and the Jumna were transferred to Dehli, and again in 1859 most of these villages were returned, making 178 villages and 209 estates. Gújars hold 47 villages, Rajpúts 18, Skinner estate 25, Káyaths 5, Ahírs 4, Sayyids 3, in *jágír*, 8, and the rest are held by various castes. In 1797, Váman Rao, the nephew and successor of Appa Kandi Rao, intrusted Dádri to Kashmíri Boli, a favourite, who had always been an enemy of George Thomas, the Marhatta commander in Mewat. The latter, after defeating a party that had been sent against him, invaded Dádri and levied contributions on the principal inhabitants.

DÁDRI, the chief village of the parganah of the same name in the Bulandshahr district, is situated on the Grand Trunk Road to Dehli 20 miles to the

north-east of the civil station, 11 miles north-west of Sikandarabad, and 23 miles south-east of Dehli. The population in 1865 numbered 2,073 souls, and in 1872 there were 2,223 inhabitants. There is a market on Mondays, and the village possesses a police-station, post-office, a village school, a travellers' bungalow, *paráo*, and encamping-ground. The railway runs about one mile south, and is connected with the town by a metalled road. Not a hundred years ago Dádri was a common little village, tenanted by Bhatti Gújars; but during the dismemberment of the Mughal empire, one Dargáhi Singh, a Gújar of Katahra, took up his abode here, and building a fort and bazar, raised the little village to the dignity of a town. This Dargáhí Singh came of a family of freebooters, but the wise Wazír Najíb-ud-daula bribed him with the lease of 133 villages of which he had forcibly possessed himself, and the high sounding title of *chormári*, (the "thief-smasher") to restrain his former companions, of whom his father, Shambu Singh, had been leader. This lease was fixed at Rs. 29,000, and seems to have been recognized by the Marhattas, and after them by the English, until 1819, when upon the death of Ajít Singh, son of Dargáhi Singh, the lease lapsed, and the villages comprised in the tenure were formed into a separate parganah and settled with different persons. Rs. 500 a month were fixed as pension for Ráo Roshan Singh, the eldest son of Ajít Singh. During the troubles of 1857 Roshan Singh's sons and brothers joined the rebels. Two members of the family were captured and hanged, and the property of all was confiscated. Dádri lies on the Grand Trunk Road from Aligarh to Dehli, 12 miles from Sikandarabad and 11 miles from Ghaziabad. The road all through is metalled and bridged. From Sikandarabad it passes by Sherpur and Jokabad, and crosses the Bulandshahr branch of the Ganges Canal at Kot by a bridge, 5½ miles (there is a rest-house here). The Dádri Railway Station is 1½ miles west of the village of Dádri. Supplies and water are plentiful. On the 26th September, 1857, Colonel Greathed's column marched to Dádri, where, owing to much plunder belonging to Europeans having been discovered, the villages in the neighbourhood were burned.

DAULATPUR, a village in parganah Ahár of the Bulandshahr district, is distant 24 miles from the civil station. The population in 1872 numbered 2,013 souls. The village was purchased in 1820 by Sídi Khán, a Pathán of the Bázid Khail clan, and then a risáldár in Skinner's horse. His son, Muhammad Khán, is now one of the Ráises of the district.

DANKAUR, the chief town of the parganah of the same name in the Bulandshahr district, is situated in the ravines and on and below the high bank separating the uplands from the lowlands of the Jumna, on the old imperial road leading from Aligarh to Dehli, at a distance of 20 miles to the south-west of Bulandshahr. The population in 1853 numbered 5,203 souls, and in 1865

there were 4,258 inhabitants. The census of 1872 shows 5,423 inhabitants, of whom 4,210 were Hindús (2,045 females) and 1,213 were Musalmáns (590 females). A market is held here every Saturday. The site occupies 251½ acres, giving 22 souls to the acre. There are 1,238 houses. The town possesses a police-station, a post-office, and a halkahbandi or village school. The Chaukidári Act (XX. of 1865) is in force, and in 1872-73 supported a village police numbering 22 men at an annual cost of Rs. 1,224, besides a staff of scavengers. The cost is defrayed from the house-tax, which in the same year yielded an income of Rs. 1,809, or Re. 0-5-4 per head of the population and Re. 1-7-4 per house assessed (1,039). The expenditure amounted to Rs. 1,635, chiefly in wages and works of local improvement charged to income, and a balance of Rs. 83 from the previous year. The traffic across the Jumna by the Makanpur ghát passes through the town, which has little traffic of its own. The Jumna must have, at one time, flowed close to the town, as there are many marks which show that it must have receded at least the two miles which now intervene between the town and its banks.

History.

According to ancient tradition Dankaur was either founded by or named after Drona,[1] commonly called Dona, the tutor of the royal youths of Hastinápur, and one of the most noted warriors of the Mahábhárata. The correct name of the town is said to be Dronakuar, and a masonry tank and temple still exist which are called Dona-chár (Drona-achárya). It is not proved, however, that Drona either founded or ever lived near the town, and it is evident from the Mahábhárata that he did not die here. There is a tradition, confirmed by a legend of the Mahábhárata, that when the fame of Drona as an archer spread far and wide, it reached the ear of the son of a Bhil Raja who lived in the forests on the bank of the Jumna. This young man was very anxious to be instructed in the use of the bow, so he repaired to Hastinápur, and sought to put himself under the tutorship of the renowned Drona. The latter hero, remarking that the Bhils were professional and hereditary robbers, as well as enemies of the godlike Aryan race, declined to instruct the ambitious youth. Sorely disappointed the young Bhil returned home, but nothing daunted by the repulse he had met with at Hastinápur, he resolved that if he could not have a living Drona for his tutor he would have the next best thing, a lifeless one. He accordingly made a clay image of Drona, set it up in a plain, and practised archery by its side, taking care to pay it all the reverence he would have payed it great original. By constant practice, the youth, at last, became a famous archer, and after some time a rumour of his skill reached Drona himself. Drona, full of wonder, went one day to the young Raja's house, and saw that he had, in spite of the refusal to instruct him, become quite a respectable marksman

[1] Wheeler's History of India, I., 82.

He asked him how it was. The youth told him of having made the clay image, and of his practice. The Aryan chief, prudently thinking that the Bhíls under a leader such as the young Raja might probably become formidable enemies, craftily asked him to grant a favour. The Bhíl expressed his willingness to do so, whereupon Drona asked him to cut off the forefinger of his right hand. The foolish boy was about to comply, when the chief magnanimously desired him to abstain from inflicting such an irremediable injury upon himself, and substituted for his former request one to the effect that the forefinger saved from the knife might never be used to pull the bowstring. The young man, glad enough to have saved his finger at all hazards, readily promised, and it is said that to the present day the Bhíls never use the right forefinger when drawing the bow. Such is the legend, and it is more than probable that the image of Drona supposed to have been erected somewhere near the site of the present town of Dankaur has given it the name of Drona-kunwar or Dronakhera. The ruins of a large fort built by Kayám-ud-dín Khán in the time of Akbar are still to be seen, and among them stands a mosque of comparatively recent construction. In Akbar's time Dankaur was a mahál or parganah of dastúr Baran in sirkár Dehli and súbah Dehli, and paid a revenue of 10,16,682 *dáms*, or Rs. 50,834.

DANKAUR, a parganah of tahsíl Sikandarabad of the Bulandshahr district, is bounded on the west by the Jumna, on the north by parganah Dádri, on the east by Sikandarabad, and on the south by Jewar. According to the census of 1872, this parganah had then a total area of 151 square miles, of which 100 square miles were under cultivation. The area assessed to Government revenue during the same year was 125 square miles, of which 82 square miles were cultivated, 29 square miles were culturable, and 14 square miles were barren.

General appearance.

There is a large river frontage in this parganah, and the valley of the Jumna varies from three to six, and sometimes eight miles in width from the high banks between the *bángar* or uplands and the *khádir* or the bed of the river. This area contains good soil, but is liable to inundation. Many of the villages have extensive salt plains producing nothing but *dábh* (not *dúbh*), a coarse kind of grass unfit for fodder or thatching. There are also large tracts of culturable waste yielding *pula* or thatching grass and *jháo*, a species of tamarisk (*T. articulata*). The population here is chiefly Gújar, who occupy themselves with pasturing cattle. Owing to its unhealthiness, all those who can be spared leave the *khádir* during the rains and emigrate to the uplands; a few remaining behind to look after the cattle, and these are relieved at intervals during the season. Exposure to flood and unhealthiness of climate must prevent this tract becoming anything more than a mere pasture land for many years. The soil of the uplands is throughout light and more or less mixed with sand, but is on the whole of a very fair average quality.

The inferior soils are confined to the high ridge and are half a mile to a mile in width and to an almost continuous ridge between Biláspur and Jhajhar, widening out in some places and contracting in others. The uplands are traversed by water-courses from the Bulandshahr branch canal, and contain little culturable waste. Fair cross roads connect the villages with the neighbouring parganahs, Makanpur ghát on the Jumna and the railway. Wheat, barley, indigo, cotton, tobacco, and safflower are grown. There are indigo factories belonging to the Skinner estate at Biláspur, Wailána, and Chak Jalálabad. The principal towns are Dankaur, Kásna, Jhajhar, and Biláspur. In consequence of the large proportion of lowland, the spring crops are in excess of the rain crops. Wheat and barley are the staple products. Since the settlement canal-irrigation has increased very much, and bids fair to increase still further and entirely do away with irrigation from temporary wells.

Fiscal history.

The assessment at the settlement under Regulation IX. of 1833 appears to have been light as a whole, though it pressed heavily in some instances. The alienation statement shows that 18 entire villages, chiefly belonging to Gújars, and 27 portions of villages changed hands by mutual arrangement, whilst two whole villages and three portions of villages were transferred by decree of court. The Skinner family and the Káyaths of Sikandarabad have been the principal transferrees. Of the 116 estates in the parganah, in 1865, 62 were zamindári, 18 were pattidári, and 36 were bháyachára; 1,694 holdings were cultivated by proprietors, 1,374 by hereditary cultivators, and 3,624 by tenants-at-will. The new assessment was made by Mr. R. Currie in 1863-64, and came into force from the following year. The following statement gives the statistics of both settlements and those collected in 1871; the expiring revenue of the past settlement is given—

Settlement.	Total area.	Barren and unassessable.	Culturable.	*Cultivated.*			Revenue with cesses.	*Incidence of revenue and cesses on*		
				Irrigated.	Dry.	Total.		Total area.	Total culturable area.	Cultivated area.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Past, ...	91,550	23,301	24,635	9,878	33,736	43,614	63,316	0 11 1	0 14 10	1 7 3
New, ...	95,764	25,548	23,189	16,480	30,547	47,027	67,680	0 11 4	0 15 5	1 7 0
1871, ...	96,774	25,970	23,508	16,553	30,743	47,296	72,201	0 12 0	1 0 3	1 8 5

The land-revenue, by the census returns of 1872, amounted to Rs. 65,637, falling at a rate of Re. 0-10-10 per British acre on the total area, at Re. 0-13-2 per acre on the area assessed to Government revenue, and at Re. 1-0-5 per acre on the cultivated area. The sum paid by cultivators to the

landowners as rent and cesses during the same year has been estimated at Rs. 1,95,769.

Population.

According to the census of 1872 parganah Dankaur contained 109 inhabited villages, of which 29 had less than 200 inhabitants, 48 had between 200 and 500, 24 had between 500 and 1,000, 5 had between 1,000 and 2,000, and one had between 3,000 and 5,000. The towns containing more than 5,000 inhabitants were Dankaur, with 5,423, and Jhajhar, with 5,632. The records of 1865 show that there were, then, 114 villages on the register, distributed amongst 116 mahâls or estates. The total population in 1872 numbered 57,179 souls (26,703 females), giving 379 to the square mile. Classified according to religion, there were 47,105 Hindús, of whom 21,789 were females; 10,046 Musalmáns, amongst whom 4,896 were females; and there were 28 Christians. Distributing the Hindú population amongst the four great classes, the census shows 5,111 Brahmans, of whom 2,428 were females; 5,790 Rajpúts, including 2,593 females; 2,602 Baniyas (1,210 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 33,602 souls, of whom 15,558 are females. The principal Brahman subdivisions found in this parganah are the Gaur (4,865) and Bhat. The chief Rajpút clans are the Chauhán (637), Badgújar (18), Jádon (933), Bais (2,404), Bhál, Jaiswár, Jairaniya, Bargala, and Dankauriya. The Baniyas belong to the Agarwál (2,146), Dasa (061), Rastaugi and Dhusar subdivisions. The most numerous amongst the other castes are the Kahár (1,156), Ját (1,486), Chamár (8,675), Khákrob (2,157), Kumhár (1,092), Gújar (11,341), and Ork (1,350). Besides the castes above mentioned the following are found in this parganah with less than one thousand members each:—Lodha, Darzi, Kalál, Barhai, Hajjám, Khatík, Dhobi, Ahír, Garariya, Lohár, Koli, Sonár, Gosháin, Jogi, Dhúna, Bhat, Káyath, Bharbhúnja, Bairági, Máli, Chhípi, Aheriya, Taga, Joshi, Khattri, and Agrai. The Musalmáns are distributed amongst Shaikhs (1,926), Sayyids (160), Mughals (63), Pathâns (1,420), converted Hindús (987), and the remainder are entered without distinction.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 165 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 2,007 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 993 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 10,602 in agricultural operations; 2,151 in industrial occupations, arts, and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 1,686 persons returned as labourers and

421 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 616 as landholders, 31,725 as cultivators, and 24,938 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 939 males as able to read and write out of a total male population numbering 30,476 souls.

History.

The Mewátis and the Bhotiya Rajpúts were among the dominant races and proprietors of the soil in this parganah, and were driven out and succeeded by Bargala Rajpúts and two clans of Gújars called Bhatti and Nágari. Akbar attached the parganah to dastúr Baran in the sirkár and súbah of Delhi. At the commencement of the British rule the parganah was annexed to the southern division of Saháranpur (Meerut). In 1824, on the formation of the Bulandshahr district, Dankaur was annexed to it. The result of the revision of parganahs in 1844 absorbed parganah Kásna, and after several exchanges with Palwal in Gúrgaon, 108 villages remained, which with the changes effected by the mutiny gives now 108 villages and 120 estates. The agricultural population is chiefly Gújar, and next come Rajpúts, of whom several clans are both Hindús and Musalmáns. The rest of the cultivating community is made up of Játs, Brahmans, Lodhas, Tagas, and Musalmáns. Gújars hold 48 villages, Rajpúts 11, Bilúches 11, Patháns 7, and the Skinner family 25 villages; the remainder are held by various castes.

DÁNPUR, a town in parganah Dibái and tahsíli Anúpshahr of the Bulandshahr district, lies 13 miles south of Anúpshahr; 3 miles west of Dibái, and 24 miles south-east of the civil station on the metalled road leading from Anúpshahr to Aligarh. The population in 1865 was 2,749, and in 1872 was 3,024. The principal inhabitants are Chaube and Gautam Brahmans. There is a market on Saturdays, and a halkabbandi or village school. The present proprietor is Wazír Ali Khán, Lálkháni. The founder was Dán Singh, son of Raja Ani Rái of Anúpshahr in Jahángír's reign. Dánpur lies on the metalled road from Aligarh to Anúpshahr, distant 13⅛ miles from Jáwa, the stage next Aligarh (see JÁWA) and 12 miles from Anúpshahr. The road is metalled and bridged throughout. Water and supplies are plentiful, and the country is level, open, and well cultivated. The route passes the road to Bulandshahr at 2½ miles, Jaraoti at 6 miles, the dry bed of the Fatehgarh branch of the Ganges Canal at 7¼, and Nagla Téli at 9 miles. From Dánpur to Jáwa the road passes Dángarh at 2 miles, Chaundera (on the right) at 3 miles, the Káli by a bridge at 5, and Chatári (to the right) at 7 miles. A village police numbering six men was entertained at a cost of Rs. 288 per annum in 1873.

DHARAKPUR, a village in parganah Dibái, is distant 38 miles from Bulandshahr. The population in 1872 numbered 511 souls. This village is held free of revenue as the endowment of a temple in Rámghát, but the grant dates only

from Marhatta times. The grantees have bought up the rights of the former proprietors in Dharakpur, and now all rights in the village are held by the temple representatives.

DHARMPUR, a small village in parganah Dibái, is distant 34 miles from Bulandshahr. The population in 1872 numbered 1,005 souls, and it possesses a district post-office.

DIBÁI or Dibhái, an old town in the parganah of the same name in the Bulandshahr district, is distant 26 miles south-east from the civil station, 11 miles south from Anúpshahr, 13 miles south-east from Shikárpur, and 26 miles north from Aligarh. The population in 1847 numbered 7,837 souls, in 1853 there were 8,586 inhabitants, and in 1865 there were 7,167. In 1872 there were 7,782 souls, of whom 4,515 were Hindús (2,252 females), and 3,257 were Musalmáns (1,676 females). The town site lies between two of the head branches of the Chhoiya Nála, which unite to the south below the town and form efficient drainage channels in the rains. The buildings, numbering 2,237, collect on either side of the Anúpshahr road, running from north to south, and on either side of the Bulandshahr road, running from east to west, and occupy an area of 106·2 acres, giving 73 persons to the acre. The first road is wide and commences as a low broken way of entrance, and leads to the *ganj* or market-place, a small open space, having thatched shops at the sides. It then continues for a short distance as a bazarway of poor shops, afterwards degenerating into poor mud-built houses, and ends in the northern outskirt near an open space graced by one shop and an unfinished police-station. This road is partly metalled. The old Bulandshahr road, however, is of more importance; the western portion is narrow, but after crossing the first roadway at the *ganj* it opens out a little, and towards its southern extremity is a good road with some fair shops. The school-house is here, attended by 99 boys, two-thirds of whom are Musalmáns. The other roads of the town are unmetalled and ill-kept, and no effort is made to lead the drainage to the Chhoiya.

The site.

The town wears, as a whole, an appearance of depression, and is said to have seen better days. There are many cultivators resident here, but trade is at a low ebb. Safflower of an excellent quality is grown in some quantity close to the town. The station of Kaser Dibái on the Oudh and Rohilkhand Railway lies about three miles to the east of the town, and is now connected with it by the new road to Bulandshahr from the railway station, which skirts the town on the west side. Jairámpur, the new station growing up on the Ganges bank about the head-works of the Lower Ganges Canal at Narora, is situated eight miles from Dibái. There is a market day every Monday, and four fairly-kept saráis close to each other on the Anúpshahr road afford accommodation to travellers. The water is good and the public health is excellent.

The town possesses an Anglo-vernacular school, a tahsíli school, a post-office, and a police-station. The Anglo-vernacular school has 40 pupils. Act XX. of 1856 is in force, and in 1872-73 supported a village police numbering 22 men of all grades at an annual cost of Rs. 1,224, besides a staff of 14 scavengers. The entire cost is defrayed from a house-tax, which in 1872-73 yielded an income of Rs. 2,393, or Re. 0-4-11 per head of the population and Re. 1-1-1 per house assessed (1,472). The expenditure during the same year amounted to Rs 2,984 from the revenue and a balance of Rs. 1,018 from the previous year.

History.

Dibái is said to have been built upon the ruins of Dhundgarh about the time of Sayyid Salár Masáúd Gházi, 420 *Hijri*, (1029 A.D.), when the latter expelled the Dhákra Rajpúts from Dhundgarh and razed the town. Dhundgarh was afterwards called Dhundai, and by an easy transition Dibái. The principal wards are the Jogipura, Mandinimak, Sarái Kandan Singh, Brahmanpura, Tawáif Muhalla, Chauk Durga Pershád, Kasábán, Lohárán and Saraugi's wards, Sarái Birúni, Shaikh Chishti, and Purána Kila. In the *Ain i-Akbari* we find that mahál or parganah of Dibái belonged to the sirkár of Koil, and paid a revenue of 21,69,933 *dáms* or Rs. 108,496 per annum. When this district was first formed in 1824 Dibái was made the tahsíli town, and the tahsíldár resided in the old fort of Agangír, the Marhatta amil. On the revision of tahsílis in 1859 the seat of the sub-collector of revenue was removed to Anúpshahr, and since then the old fort has been converted into an indigo factory. The zamíndári of the town is now in the hands of a family of Shaikhs, who form the more important portion of the inhabitants.

DIBÁI, a parganah of tahsíl Anúpshahr of the Bulandshahr district, is bounded on the east of the Ganges, on the west by parganah Pahásu, on the north by parganah Anúpshahr, and on the south by the Atrauli parganah of the Aligarh district. According to the census of 1872 this parganah had, then, a total area of 180 square miles, of which 132 square miles were under cultivation. The area assessed to Government revenue during the same year was 178 square miles, of which 130 square miles were cultivated, 18 square miles were culturable, and 30 square miles were barren.

General appearance.

The river frontage extends for eighteen miles along the western boundary, containing rich and fertile *khádir* lands; much of it is old and has been uninterruptedly cultivated for years, lying at a higher level than the more recent formations. None but the heaviest floods ever touch it, while the new lands are yearly inundated. The Chhoiya Nála divides into two branches in this parganah,—the one from near Khailiya in parganah Pahásu, and the other from Bagsára in Anúpshahr, which unite near the town of Dibái Khás. Further on, in the Aligarh district, it becomes a regular stream, but here it is merely a

drainage channel carrying off the superfluous moisture from Sahupur in parganah Sayána downwards. It is marked by lowlands and *jhíls*, and is not a connected stream except during the rains. In the cold weather much of its bed is ploughed up and sown with *rabi* crops as far as Dibái. The Anúpshahr branch canal enters the parganah at Surajpur Makhena, whence an escape has been made into the Ganges, close to the metalled road from Anúpshahr to Koil. The whole of the tract lying between this canal branch and the Ganges is composed of poor, light, sandy soil, with a low water-level and a crumbling, loose sub-soil, so that irrigation is difficult and temporary wells are impracticable. To the west of the Chhoiya Nála the best portion is a tract of table-land lying between the two branches of the Chhoiya, bounded by the Anúpshahr metalled road, and extending again below Dibái into a triangle, of which Dibái is the apex and the boundary of the parganah the base, while the Chhoiya forms the eastern side, and the country road from Dibái to Shaikhupur the western side. Within these limits temporary wells can be constructed, and the soil is firm and free from sand. Manure, too, is more frequently used, and the villages are highly cultivated. The rest of the parganah is mostly composed of soil of fair average quality. The culturable waste is of inferior quality and is scattered about in small patches. In several villages adjoining Ahmadgarh there is a long stretch of cultivated poor land which extends into the Aligarh district. The metalled road between Anúpshahr and Koil traverses the western portion of the parganah for from 14 to 15 miles, and there are good cross country roads. The common crops are *joár*, *bájra*, *moth*, and barley. The principal towns are Dibái, Rámghát, Belaun, Dáupur, Karanbás, and Daulatpur.

Fiscal history.

The former assessment of this parganah under Regulation IX. of 1833, made by Messrs. G. Bird and Tonnochy, was light and equable. Notwithstanding that there was a munsifi in the town during the whole currency of the past settlement, only portions of nine villages changed hands by orders of the courts, whilst the private transfers comprised thirteen entire villages and portions of thirty-two others. Of the 175 estates in the parganah, in 1865, 119 were zamíndári, 47 were pattidári, and 9 were bháyachára. The assessments of this parganah were made by the late Mr. Freeling, and some alterations in a few villages were effected by the late Mr. W. H. Lowe on notes by Mr. R. Currie. The irrigated area has increased very largely since last settlement. In 1865 there were 791 holdings cultivated by proprietors, 3,136 by hereditary cultivators, and 6,601 by tenants-at-will. This great proportion of tenants-at-will is caused by the existence of three large estates belonging to powerful zamíndárs, and by the great prevalence of the system of division of crops in lieu of cash rents, which, though very much less than formerly, still prevails here more generally than in other parts of the district. The following

statement shows the statistics of the past and present settlements; the expiring revenue of the past settlement is given:—

Settlement.	Total area.	Barren and unassessable.	Culturable.	Cultivated.			Revenue with cesses.	Incidence of revenue and cesses on		
				Irrigated.	Dry.	Total.		Total area.	Entire culturable area.	Cultivated area
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Past, ...	113,546	3,718	30,345	14,691	51,792	69,483	1,10,497	0 15 7	1 1 8	1 9 5
New, ...	115,720	21,223	15,372	31,143	47,977	79,125	1,22,427	1 1 10	1 5 11	1 10 2
1871, ...	115,416	20,788	15,736	30,961	47,931	78,892	1,39,213	1 3 3	1 7 6	1 12 2

The land-revenue for 1872, according to the census returns, amounted to Rs. 1,26,557 (or with cesses Rs. 1,39,414), falling at a rate of Re. 1-1-7 per British acre on the total area, at Re. 1-1-9 per acre on the area assessed to Government revenue, and at Re. 1-8-0 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 3,22,424.

Population.

According to the census of 1872 parganah Dibái contained 164 inhabited villages, of which 49 had less than 200 inhabitants, 65 had between 200 and 500, 30 had between 500 and 1,000, 15 had between 1,000 and 2,000, 3 had between 2,000 and 3,000, and one had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Dibái itself, with 7,782. The registers at settlement in 1865 show that there were then 150 villages, distributed amongst 175 maḥáls or estates. The total population in 1872 numbered 83,057 souls (39,637 females), giving 461 to the square mile. Classified according to religion, there were 72,247 Hindús, of whom 34,336 were females; and 10,810 Musalmáns, amongst whom 5,301 were females. Distributing the Hindu population amongst the four great classes, the census shows 10,165 Brahmans, of whom 4,818 were females; 3,801 Rajpúts, including 1,673 females; 3,269 Baniyas (1,551 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 55,012 souls, of whom 26,294 are females. The principal Brahman subdivisions found in this parganah are the Gaur (3,205), Kanaujiya, Sanádh, Chaubée, Gautam, Upádhiya, and Páthak. The chief Rajpút clans are the Chauhán (482), Badgújar (2,234), Panwár (193), Bais (196), Jádon (18), Gahlot, Kachhwáha, Pundir, Katehiriya, and Dor. The Baniyas belong to the Agarwál (961), Dasa (673), Bárahsaini, Jewar, Gaharwál, and

Saraugi subdivisions. The most numerous of the other castes are the Lodha (18,594), Barhai (1,145), Kahár (2,378), Ját (1,545), Hajjám (1,463), Khatík (1,761), Dhobi (1,064), Chamár (10,482), Kbákrob (1,980), Ahír (2,181), Gara-riya (2,482), Koli (1,983), and Kumhár (1,049). Besides the above castes the following are found in this parganah with less than one thousand members each:—The Darzi, Kalál, Lohár, Sonár, Gosháin, Jogi, Dhúna, Bhát, Káyath, Bharbhúnja, Bairági, Máli, Chhípi, Aheriya, Joshi, Káchhi, Malláh, Ráj, Kanjar, Bohra, Marwári, Kurmi, Teli, and Mína. The Musalmáns are distributed amongst Shaikhs (2,308), Sayyids (159), Patháns (545), and the remainder are entered without distinction.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age) 543 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 3,201 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,508 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 12,962 in agricultural operations; 2,814 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 4,745 persons returned as labourers and 569 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 2,164 as landholders, 37,891 as cultivators, and 43,002 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,802 males as able to read and write out of a total male population numbering 43,420 souls.

History.

The Meos, Dors, and Panwárs were the dominant races in this parganah, but now the Meos own nothing, the Dors have only a fourth share in one village, and the Panwárs hold two villages. These were ousted by the Badgújars. Akbar attached the mahál to dastúr Thána Farída in sirkár Koil and súbah Agra, and on the British occupation it was included in the Aligarh district. In 1824, on the formation of the Bulandshahr district, this parganah, then containing 136 villages, was annexed to it. On the revision of parganahs in 1844 fourteen villages were added from the neighbouring parganahs. Up to 1859 Dibái was the head-quarters of a tahsíl, but in that year the tahsíl was removed to Anúpshahr. The Musalmán Badgújars own 71 villages, of which 51 belong to the Lálkháni family and 20 to the Sábitkháni; Hindú Badgújars have 16 villages; Bais hold 12; Panwárs 2; the Ráni of Katyáni 6; Baniyas 11; and various castes hold the remainder. Dharakpur, the only revenue-free village, is assigned to support a temple at Rámghat since the Marhatta times.

GALÁOTHI, an old town in parganah Agauta of the Bulandshahr district, lies 12 miles north from Bulandshahr on the Grand Trunk Road. The population in 1865 consisted of 702 agriculturists and 4,439 persons professing other occupations: in 1872 the population amounted to 5,608 souls, of whom 2,658 were Hindús (1,191 females) and 2,943 were Musalmáns (1,489 females). There is a market here every Monday, an encamping-ground, sarái, police-station and post-office. The town site occupies an area of 44 acres 2 roods, giving 127 persons to the acre. All but five houses out of 1,483 in the town are built of mud. The Grand Trunk Road passes at a little distance to the west of the town, and from it there are two entrances converging on a central space. Neither entrance is well made or raised, and one has to pass through a considerable excavation before reaching the centre of the town. The bazar lies along the southernmost entrance way, and consists of some fifty poor shops built of mud and thatch. About the centre of the town another road connects the bazar with the southern outskirt. Both roads are metalled. The northern entrance way is unmetalled and sends off a branch to the bazar on the south. The site is only slightly raised, and both to the north and south-west are large excavations, from which a cut has been made as an escape to the Káli Nadi, which runs about two miles to the east. Irrigation takes place from a *rájbaha* of the Ganges Canal, which runs close to the town. The principal inhabitants are Baniyas and Sayyids, both of whom are on very bad terms with each other, and are often engaged in affrays. The Sayyids are called Sabzwári, and came from Sabzwár in Turkistán during the reign of the Tughlik dynasty. The Chaukidari Act (XX. of 1856) is in force, and in 1872-73 supported a village police numbering 16 men of all grades at an annual cost of Rs. 882, besides a staff of eight sweepers. The cost is defrayed from a house-tax, which in 1872-73 yielded Rs. 2,001, or Re. 0-5-8 per head of the population and Re. 1-5-7 per house assessed (1,239). The expenditure during the same year amounted to Rs. 2,390, chiefly on paving, draining, and wages of establishment, which was met from the income and a balance of Rs. 389 from the previous year. The names of the principal wards give the founder's names; they are Faiz-ullah, Sharáfat-ullah, Munu Khán, Siudat, Pír Khán, Budha Khán, Kurbán Ali, Azím-úd-dín, and the sarái erected by Mr. Plowden in 1848.

History.

Akbar gave large revenue-free grants here to a number of Sayyids, whose descendants held them until 1858, when the grants were confiscated on account of the rebellion of the holders and were bestowed on the Játs of Bhatona. Walidád Khán's half-share of the village was confiscated at the same time and was purchased by Sayyid Mihrbán Ali. The Mewátis were the original proprietors and founders of Galáothi, and still own a half share in the village. The name is said to be derived from Gulábi, the daughter of the Mewáti founder, but

others say it is so called because it was the head-quarters of the Gahlot Rajpúts, and was originally Gahloti, and thence by an easy change Galáothí. The bench-mark of the Great Trigonometrical Survey is imbedded at the encamping-ground on the south-west side of the road opposite the police-station, and shows a height of 680·52 feet above the level of the sea. Galáothi is a halting-place on the route between Aligarh and Meerut, distant 11¾ miles from Bhúr, near Bulandshahr (see Bhúr), and 10⅜ miles from Hápur, in the Meerut district. The road is metalled and bridged throughout. There is a rest-house here, and supplies and water are abundant.

Hátimabad, a small village in parganah Baran of the Bulandshahr district, is distant 4 miles from the civil station. The population in 1872 numbered 1,128 souls. It formerly belonged to a Shaikh family, who held it free of revenue up to 1857, when their rights were confiscated on account of rebellion. It has been assessed at Rs. 179 per annum, and was given in reward to Mr. P. Saunders, who built a small indigo factory here, but afterwards sold the estate to Nawáb Faiz Ali Khán, C.S.I.

Jahángírabad, a town in the parganah and tahsíl of Anúpshahr, in the Bulandshahr district, is distant 15 miles east from the civil station. The population in 1847 numbered 9,639 souls; in 1853 there were 10,247 inhabitants, and in 1865 there were 8,875. The census of 1872 shows 9,408 inhabitants, of whom 6,914 were Hindús (3,392 females) and 2,494 were Musalmáns (1,264 females). The area of the town is 123 square acres, giving 76 souls to the acre. The site is low, and the town may be said to consist of a collection of houses (3,254), often embosomed amid trees, on either side of one large central way. This is crossed by two short bazarways, at right angles to which the roads are rather depressed. Only the shop fronts of the bazar and one other house are brick built, the remainder of the houses are built of mud, and the greater portion of the ways is unmetalled and rather low. Formerly there was a mud wall all around the town, and the excavation left by it now fills with stagnant water; whilst to the south an extensive depression, known as the Barwai Pokhar, collects the drainage from a large expanse of country, and to the north there are several excavations made by brick-makers. The consequence of the lowness of the site and the existence of these receptacles for water, with no outlet, is that often during the rains the whole site gets flooded and the ways fall into a miserable state from mud and water, and the people could not easily get out of the town but for the raised central road. It might be possible to lead this drainage towards a *kha*- about 1¾ miles to the east, which forms one of the heads of the Chhoiya Nadi. Fever is a prevalent complaint in the rains, but is not as a rule fatal or persistent. The well water is 27 feet from the surface, and is remarkably good both in and near the town. Act XX. of 1856 is in force and supports a

Site.

village police numbering 23 men of all grades at an annual cost of Rs. 1,278, besides 17 scavengers. The income is drawn from a house-tax, which in 1872-73 yielded a revenue of Rs. 3,969, falling at Re. 0-6-9 per head of the population and at Re. 1-3-3 per house assessed (2,177). The expenditure during the same year was Rs. 4,566, chiefly for works of public improvement connected with the sanitation of the town, and was defrayed from the income for the year and a balance of Rs. 1,716 from the previous year. There is no trade, and no merchants of note reside here. There is a mosque, a school formed out of an old confiscated *báradari*, and attended by an average of 107 pupils. Off the main road there is a well-kept sarái, with the usual mud huts and shady trees. The land around is highly cultivated, bearing rich crops of safflower and cereals right up to the ditch, and all the manure procurable is used for this purpose. A large market is held every Wednesday in the northern outskirt of the town, where the local manufactures of coarse chintz, hackeries and raths are exchanged for grain. The town is only about one mile to the north of the metalled road between Anúpshahr and Bulandshahr. The existing muhallas are called Pátak Bazar, Bansidhar Bazar, Khám Kila, and Bazar Pakatiya. There is a police-station and a post-office here.

History.

Jahángírabad was founded at the same time as Anúpshahr by the same Badgújar Raja, Ani Rái. He called this town after the name of his patron Jahángír. Jahángírabad was first built, but not finding it sufficiently central for his new acquisitions, Ani Rái removed to Anúpshahr. In the seventh generation from Ani Rái the property was divided and Jahángírabad fell to Mádho Singh, who made the town his residence. The grand-daughter of Mádho Singh is still alive and resides here. None of the villages on this side of the Ganges originally included in the Raja's *jágír* are now in the possession of his family, but they still hold a few villages in the Budaun district. The present proprietors of the site are Muhammad Ali Khán, Nakshaband Khán, and Isháq Khán, by whose grandfather, Murtaza Khán (son-in-law of the celebrated Ismaíl Beg), the estate was purchased at the auction sale of the rights of Raja Khoras Ráj in 1813 A.D. Muhammad Ali Khán is a Bangash Afghán, an Honorary Magistrate, and a large landed proprietor, and, though an auction purchaser, has much local influence. His father Mustafa Khán was a relation of the rebel Walidád Khán, and sided against the English during the mutiny. It was proved on his trial that he corresponded seditiously with the Emperor of Dehli, and he was sentenced to seven years' imprisonment, but was subsequently pardoned by Government.

JAHÁNGÍRPUR, a village of parganah Jewar and tahsíli Khúrja of the Bulandshahr district, lies 18 miles south-west of the civil station. The population in 1865 was 3,322, and in 1872 was 3,443. Jahángírpur possesses a market on Fridays and a halkahbandi or village school.

JÁRCHA or Jhárcha, a town in parganah Dádri of the Bulandshahr district, is distant 8 miles north from Sikandarabad, 7 miles east from Dádri, and 20 miles north-west from Bulandshahr. The population in 1865 numbered 4,018 souls, and in 1872 there were 4,463 inhabitants, chiefly Sayyids. There is a market on Wednesdays and a police-station and village school. The main Ganges Canal runs about one mile north of the town. The town is famous for the number (5,600) and excellence of its mango trees. The Chaukidári Act (XX. of 1856) is in force, and in 1872-73 supported a village police numbering eight men of all grades at an annual cost of Rs. 384, besides a staff of sweepers. The correct name of the town is said to be Chár Cháh, or "the four wells," because, according to tradition, four wells were sunk here by the founder of the town, Sayyid Zain-ul-abdín, who obtained a revenue-free grant of 3,500 bíghas from Mubárak Sháh, the Sayyid Emperor of Dehli, on condition of ousting the Mewátis. The four wells are still to be seen, and the descendants of the founder continued in enjoyment of the grant until 1857, when they took part in the plunder of Sikandarabad, and were punished by confiscation of their holdings. The village was then sold by auction and fetched Rs. 1,78,000. The present proprietors are Lálá Shiu Singh, Ráis of Dehli, and the heirs and assigns of the late Karam Ali Khán, tahsíldár of Gházi-abad, in the Meerut district. The Sayyids of Járcha are called Sabzwári, and claim descent from the Sayyids of Sabzwár in Turkistán, whence they came during the reign of the Tughlik dynasty.

JEWAR, a town in the parganah of the same name in the Bulandshahr district, lies in the ravines and broken ground along the high banks that separate the uplands from the Jumna *khádir*, at a distance of 26 miles to the south-west of Bulandshahr on the Khúrja road, and 20 miles east from Khúrja. The population in 1847 amounted to 5,835, in 1853 to 6,056, and in 1865 to 6,976. In 1872 there were 7,399 inhabitants, of whom 5,312 were Hindús (2,587 females) and 2,087 were Musalmans (1,089 females). There are 1,762 houses. The town site occupies an area of 78 acres, giving 95 souls to the acre. There is only one good metalled and drained street, which commences on the east at a broken gateway and opens out into a *mandi* or market-place; thence it again becomes narrow and crooked as it rises gently to the top of the high site; it then again descends gradually as a tolerably wide bazarway, and ends in a little frequented and broken road which leads through the *khádir* to the Jumna. The *khádir*, here, stretches level and green for some miles between the town and the river. There are some handsome houses in the *mandi* and good brick-built shops in the principal bazar. The houses are rather overcrowded, but the position of the site well raised, and with good drainage towards the river, is in itself a great advantage and very conducive to health. The water in the

The site.

wells stands at a depth of about 45 feet from the surface and is everywhere good. The few excavations drain well towards the *khádir*, and little is necessary to help the natural sánitary arrangements. There are about 500 brick-built houses in the town and many good *kothis*. Act XX. of 1856 (the Chaukidári Act) is in force, and in 1872-73 supported a village police numbering 22 men of all grades at an annual cost of Rs. 1,224, besides eight sweepers. The cost is defrayed from a house-tax, which in 1872-73 yielded a revenue of Rs. 2,368, or Re. 0-5-3 per head of the population and Re. 1-5-6 per house assessed (1,374). The expenditure during the same year was Rs. 2,824 from the income, besides Rs. 456 balance of the previous year. Jewar has a small manufacture of cotton rugs *(kálín)* and carpets. There are two saráis for travellers, and a market is held every Friday. The wards of the town are Kanúngoi, Sarái Nim Singh, Kuncha, Boigne Sarái, Káziwára, Bhatpura, Chaudhriwála, Balabpura, Chaukholi, Mánikchauk, and Kitrpál. These names explain themselves: Boigne was the celebrated French General of that name in the Marhatta service; Nim Singh was a Jádon leader in the raid against the Mewátis. There is a halkabbandi and Anglo-vernacular school, a post-office, and a police-station. In this town are about 1,500 Jágas who act as a sort of Herald's College for the Rajpúts of the surrounding districts, being hereditary pedigree-keepers, and probably often makers. A Hindu fair is held every year in the month of Bhádon at the temple of Baldeoji every Tuesday from February to June at the temple of Sítala Devi; and a Muhammadan *urs* is held in the month of Shábán in the suburbs of the town, at the *khánkah* of Shakarbaras. At these fairs the sweetmeat called *ghebar* is sold.

History.

In the time of Akbar Jewar was the centre of a mahál or parganah belonging to sirkár Dehli, and paid a revenue of 18,78,378 *dáms*, or about Rs. 93,918. The ancient name of the town was Jáwáli, so called in honour of its founder, a Brahman anchorite. In the beginning of the twelfth century of Vikramádityá's era, when the crusade against the Mewáti tribe was being generally prosecuted in this district, the Chhonkar Jádon Rajpúts were invited from Tainagar, in Bhartpur, by the Brahmans of Jewar to expel their oppressors, the Meos. They complied with the request, and possessed themselves of parganahs Jewar and also of Jewar Khás from the Brahmans, to whom they gave five Meo villages in exchange. The descendants of the Jádon leader Ahardeo or Deopál are still Chaudhris of the town. During the Tughlik dynasty the office of Kázi was bestowed on one Muhammad Násir, and his descendants are still in enjoyment of the title. The office of kanúngo was bestowed by Akbar on Rái Dún Mal, Agarwála, and it is still in his family. The town was held in *jágír* under Aurangzíb by one Banwari Das, Surajdhvaj. He held it 52 years, and after his death it passed into the hands of Sumru Begam, who held it until 1836, when upon her death it lapsed to Government.

JEWAR, a parganah in tahsíl Khúrja of the Bulandshahr district, is bounded on the north and east by parganahs Dankaur and Khúrja of the same district, on the south and south-east by parganahs Tappal and Chandaus of the Aligarh district, and on the west by the Jumna, which separates it from parganah Palwal of the Gurgaon district. In 1872, by the census returns, this parganah had a total area of 140 square miles, of which 99 square miles were under cultivation. The area assessed to Government revenue during the same year was 140 square miles, of which 99 square miles were cultivated, 35 square miles were culturable, and 6 square miles were barren.

General appearance.

With the exception of a ridge of yellow sand which runs almost without interruption down the centre of the parganah, varying in width, and a portion of such another ridge in the north-east corner, the soil is generally good. There is, however, little irrigation in comparison with the cultivated area. There are no streams, lakes or ponds, and wells are chiefly confined to the eastern portion of the parganah, where the water level is from 15 to 18 feet from the surface, whereas in the western half it is from 25 to 48 feet. The nearer one approaches the high banks dividing the *bángar* or upland from the *khádir* or bed of the Jumna, the further is the water-level from the surface. The soil too for about half a mile or three-quarters of a mile inland from the high banks is very poor throughout the parganah. To the west the soil is firm down to the low water-level, while in the east the substrata are generally loose and friable, and the water-level is often in sand. There is an immense quantity of culturable waste of good quality as yet unbroken in this parganah, and as yet little irrigation from canals, though irrigation is much wanted. Only 28 per cent. of the cultivated area was watered in 1865, and only the common crops of the two harvests are raised. The natural products of the uncultivated waste yield some small returns in the shape of wood for fuel, grass and grazing dues. There is a broad expanse of *khádir* land immediately under the town of Jewar which stretches on into the Aligarh district. Some villages to the east of the parganah have suffered much from obstructed drainage. The superfluous moisture from Rakhor used to pass through Jahángírpur and Siriya through a canal culvert into the Káron, but this has now been impeded and requires attention. There are no important roads, though good cross roads join Jewar with the neighbouring towns and the Khúrja Railway Station. The principal towns are Jewar, Jahángírpur, and Rabúpura.

Fiscal history.

On the lapse of the parganah in 1836 by the death of Begam Sumru, the first settlement of Jewar proper was made by Mr. Tonnochy, and was reported by him in 1841. Since then the parganah boundaries have been very much changed. The assessment proved a heavy one, for no less than seven entire villages were farmed for arrears of revenue, and six portions of villages were transferred to solvent sharers. The

alienation statement, also, shows the pressure of the Government demand. Four whole villages and 35 portions were transferred by mutual arrangement, and two whole villages and 22 portions of villages by order of the civil court. The transfers have been chiefly in Rajpút villages, but also in five Ját villages, and the assessment must be a heavy one that drives Játs to the money-lender. Of the 108 estates in the parganah 42 are *zamíndári*, 39 are *patlidári*, and 27 are *bháyachára*. 1,421 holdings are cultivated by proprietors, 1,251 by hereditary cultivators, and 3,227 by tenants-at-will. The new settlement was made by the late Mr. Lowe in 1861-62, and came into force from the following year. He also notes, as regards the severity of the past settlement, that the assessment was very unequal, and could only be accounted for on the supposition that Mr. Tonnochy based his assessments on those of the Begam, who was known to collect as much as all her ingenuity could manage to extract from the cultivators. The following statement shows the statistics of the past and present settlements and those collected at the revision in 1871; the expiring revenue of the past settlement is given:—

Settlement.	Total area.	Barren and unassessable.	Culturable.	*Cultivated.*			Revenue with cesses.	*Incidence of revenue and cesses on*		
				Irrigated.	Dry.	Total.		Total area.	Total culturable area.	Cultivated area.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Past, ...	88,445	8,704	34,837	8,426	36,478	44,904	86,555	0 15 8	1 1 4½	1 14 10
New, ...	89,642	7,791	24,688	16,166	40,997	57,163	85,539	0 15 3	1 0 9	1 7 11
1871, ...	89,314	7,853	24,552	16,135	40,794	56,929	93,739	0 15 0	1 0 5	1 7 6

The land-revenue for 1872 amounted to Rs. 85,217 (or with cesses Rs. 93,747), falling at a rate of Re. 0-15-3 per British acre on the total area, at Re. 0-15-3 per acre on the area assessed to Government revenue, and at Re. 1-5-6 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 1,61,725.

Population.

According to the census of 1872 parganah Jewar contained 91 inhabited villages, of which 20 had less than 200 inhabitants, 40 had between 200 and 500, 21 had between 500 and 1,000, 6 had between 1,000 and 2,000, and 3 had between 2,000 and 3,000. The only town containing more than 5,000 inhabitants is Jewar itself, with 7,399. The settlement records show that at the revision in 1865 there were 93 villages on the register, distributed amongst 108 mahál or estates. The total population in 1872 numbered 57,319 souls (26,780 females), giving 409 to the square mile.

Classified according to religion, there were 49,874 Hindús, of whom 23,105 were females, and 7,445 Musalmáns, amongst whom 3,675 were females. Distributing the Hindú population amongst the four great classes, the census shows 8,026 Brahmans, of whom 3,722 were females ; 7,682 Rajpúts, including 3,412 females ; 3,409 Baniyas (1,538 females) ; whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 30,757 souls, of whom 14,433 are females. The principal Brahman subdivisions found in this parganah are the Gaur (7,678), Bhat and Charasiya. The chief Rajpút clans are the Chauhán (276), Badgújar (164), Panwár (205), Jádon (1,101), Bais (53), Bhál, Jaiswár, Janghára, Bargala, Narman Rewari, Bhatti, and Jarubiya. The Baniyas belong to the Agarwál (2,709), Dasa, (46), Dhanu and Bohra subdivisions. The most numerous amongst the other castes are the Kabár (1,307), Ját (4,713), Hajjám (1,085), Khatik (1,690), Chamár (8,899), Khákrob (1,724), Koli (1,019), and Orh (1,110). Besides the castes above mentioned the following castes comprising less than one thousand members each are found in this parganah :—Lodha, Darzi, Kalál, Barhai, Dhobi, Garariya, Ahír, Lohár, Kumhár, Sonár, Gosháin, Jogi, Dhúna, Bhát, Káyath, Bharbhúnja, Máli, Chhípi, Taga, Gújar, Teli, Malláh, Bohra, Mína, Agrai, and Mirdaha. The Musalmáns are distributed amongst Shaikhs (986), Sayyids (179), Mughals (52), Patháns (368), converted Hindús (372), and the remainder are entered without description. Jádons, Jaiswárs, and Panwárs are the principal Rajpút cultivators, but Játs, Brahmans, and Tagas make the best agriculturists.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 200 are employed in professional avocations, such as Government servants, priests, doctors, and the like ; 1,680 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,351 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 10,297 in agricultural operations ; 1,909 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,468 persons returned as labourers and 274 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 2,499 as landholders, 27,846 as cultivators, and 26,974 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,419 males as able to read and write out of a total male population numbering 30,539 souls.

History.

The Meos held this parganah also, and were expelled thence by a band of Chhonkar Jádons from Tainagar, in Bhartpur, invited here by the Brahmans of Jewar. Akbar attached the parganah to dastúr Baran in sirkár and súbah Dehli. It was given in *jágír* by

Sháh Alam to Begam Sumru, and on her death, in 1836, was annexed to the Bulandshahr district. It then consisted of 95 villages and hamlets; 15 hamlets were absorbed in the parent villages; six villages were transferred to, and two were received from, Palwal in Gurgaon, and in 1844 the number was reduced to 75. In 1859, tappa Rabúpura, a portion of the privy purse lands *(taiyúl sháhi)* of the Dehli king, gave 17 villages to Jewar, making, now, 93 villages and 108 estates. Chhonkar Jádons hold 27 villages, Jaiswárs 16, Panwárs 2, Játs 16, Tagas 5, Shaikhs 3, Brahmans 1, Eurasians 2, and the remainder are held by various castes.

JHÁJHAR, a town of parganah Dankaur in the Bulandshahr district, is situated 15 miles south-west of Bulandshahr on the metalled road, *viz.*, Chola. The population in 1865 was 4,768, and in 1872 there were 5,632 inhabitants, of whom 3,083 were Hindús (1,425 females) and 2,549 were Musalmáns (1,375 females). The site occupies 49½ acres, giving 119 souls to the square acre, and contains 13,303 houses. There is a market on Tuesdays. The town possesses a post-office, police-station, and a village school. The Chaukidári Act (XX. of 1856) is in force, and in 1872-73 supported a village police numbering 16 men of all grades at an annual cost of Rs. 882, besides a staff of scavengers. The cost is defrayed from a house-tax which during the same year yielded a revenue of Rs. 1,688, or Re. 0-4-9 per head of the population and Re. 1-4-7 per house assessed (1,088). The expenditure was Rs. 1,991, chiefly in wages and works of local improvement, met from the general income and a balance of Rs. 185 from the previous year. The houses and shops, 1,303 in number, are chiefly built of mud. The inhabitants are principally Bilúch Musalmáns and Dhúsar Baniyas.

History.

The founder of the town, a Bilúch by name Sayyid Muhammad Khán, is said to have accompanied Humáyún in his raid, and to have been a distinguished military leader under Akbar. The town seems, like infant Rome, to have been originally peopled by the runaways from and outcasts of society. Hence it was called Bhájar, or "the settlement of deserters." The date of the foundation may be fixed at about two or three years after Humayún's return. The descendants of Sayyid Muhammad in the ninth generation are still proprietors of the town and of many villages in the neighbourhood. Their chief is Ghulám Ghaus Khán, a very respectable zamíndár. Before the mutiny Jhájhar supplied many Bilúch recruits to the light cavalry regiments. Jhájhar lies on the route from Aligarh to Dehli by Faridabad, and is distant 12¼ miles from Khúrja towards Aligarh, and 12½ miles from Chhainsa towards Dehli. The road from Khúrja is a third class unmetalled one, and hence to the Jumna at Makanpur ghát it is bridged and raised. From Khúrja the Káron is crossed by a ford, and the canal twice by bridges. Between Jhájhar and the Jumna the

Patwaliya is crossed at Rabúpura by a ford, and then the road pases by Kher and Rámpur to Makanpur, where there is a bridge-of-boats. Chhainar is on the right bank of the Jumna in the Dehli district.

KAKOR, a village of parganah Sikandarabad and tahsíl of the same name of the Bulandshahr district, lies 12 miles west of the civil station and the same distance south of Sikandarabad. The population in 1865 was 2,263, and in 1872 was 3,523. There is a market on Fridays, and a halkahbandi or village school attended by 47 pupils. There is a large trade in cotton here. The town is dirty, as there are no conservancy arrangements in force. Still it is a thriving place, and its Marwári traders do a large business in cotton and in lending money to the surrounding villages. It is said to have been the residence of the collector *(karori)* in the time of Prithiráj.

KARANBÁS, a town of parganah Dibái and tahsíl Anúpshahr in the Bulandshahr district, is situated upon the right bank of the Ganges, 12 miles south-east of Anúpshahr, 5 miles north-east of Dibái, and 30 miles south-east of Bulandshahr. It is said to have been founded by one Raja Karan, a half brother of the Pándavas, or, according to others, a contemporary of Vikramáditya of Ujayini. There is here a very old temple sacred to Sitla Devi, the goddess of small-pox, which is visited by numbers of women every Monday. The *Dasáhra* fair of Karanbás is the largest in the district, and is attended by about 100,000 pilgrims from the west. The population of the town in 1872 was 2,057, against 2,180 in 1865, comprised almost entirely of Hindús. The zamíndárs are old and wealthy Bais Rajpúts. There is a Hindi halkahbandi school here.

KAROL, a village in parganah Jewar of the Bulandshahr district, in latitude 28°-10′-12″ and long. 77°-35′-32″, at an elevation of 733·7 feet above the level of the sea. The upper markstone of the Great Trigonometrical Survey station stands on the mound of a ruined redoubt on the high east bank of the Jumna, which flows within a quarter of a mile of it; it is situated in the village of the same name. Jewar lies to the south-south-west of the station, 3·2 miles; Begamabad to the north, 0·9 miles; Dayánatpur to the north-east, 1·4 miles; and Chandat to the north-west, 6·9 miles. This height is deduced trigonometrically.

KÁSNA, a decayed town in parganah Dankaur of the Bulandshahr district, is situated on the left bank of the Hindan, about 19 miles east of Bulandshahr and 4 miles to the east of the Jumna. The population in 1865 numbered 1,532 souls, and in 1872 there were only 1,768 inhabitants. There is a police-station and a village school and a market on Mondays. The site is poor, uncared for and undrained. An escape of the Bulandshahr branch of the Ganges Canal joins the Hindan here. The zamíndári rights in the town belong to Shaikhs and Agarwála Baniyas, but the town is said to have been founded by

one Raja Kánsal or Kánsil, a Bhatti Rajpút, who led here a large colony of immigrants from Jaisalmer in the time of Prithiráj, Chauhán, of Dehli. The Rajpút descendants of the founder held the zamíndári of the town until their expulsion by certain Shaikhs of the family of one Shaikh Chúhar, who received a revenue-free grant of some 2,500 bíghas, including the town of Kásna, somewhere about the time of Timúr's invasion. Certain Agarwála Baniyas, descendants of Raja Raghunáth Dás, who was favoured with a grant of 200 bíghas revenue-free, at the same time, are part proprietors of the village. The old Rajpút settlers after their expulsion took up their abode in the village of Ghori, near Dádri, where their descendants are still to be found. In Akbar's time Kásna was the head of a mahál or parganah of the sirkár and súbah of Dehli, which yielded a yearly revenue of 15,22,315 *dáms*, or Rs. 76,115. Kásna appears to have seen better days, and the ruins of a large brick fort and other forts close by testify to its former greatness. The tomb of Ikrám Khán, one of the officers intrusted with the building of the fort at Dehli by Sháh Jahán, constructed of red sand-stone still exists in a fair state of preservation. It is more than probable that the town was sacked and pillaged by the neighbouring Gújar communities during the decline of the Mughal empire in the last century.

KESHOPUR SATHLA, a village in pargana Sayána and tahsíli Baran of the Bulandshahr district, lies 25 miles north of the civil station and 5 miles west of Sayána. The population in 1865 was 2,110, and in 1872 was 2,265. There is a market on Thursdays, a post-office and a very good halkahbandi or village school, with 80 pupils. The town was founded by a Gujráti Brahman, named Kesho Bhatta, 250 years ago. The Gujrátis are still its leading residents. The original name of the town was Keshopur only, but it is said that at one time its leading residents were such blockheads that the neighbouring towns gave it the distinguishing appellation of *Shathálaya*, or "the residence of fools."

KHÁNPUR, a town of parganah Ahár in the Bulandshahr district, is situated on the Bulandshahr road about 12 miles west of Ahár. The town was formerly called Ghatti Nasírabad in honour of its founder, but the name was changed in the reign of Jahángír, who made the town over in *jágír* to one Allu Khán, a Dávezái Afghán of Khúrja. The *jágír* was resumed by Aurangzíb, but the original grantees retained possession on the payment of the assessed revenue of the town until 1857, when Abdul Latíf Khán, the seventh in descent, joined the rebels and lost all his lands. Abdul Latíf Khán was, at that time, the second wealthiest and largest landholder in the district, and proprietor of 158 villages. His estates were parcelled out in reward to many of those who remained faithful, but the lion's share fell to the lot of Sayyid Mír Khán Paghmáni, Sirdár Bahadur, a Kábuli refugee, who did good service to the British Government before and during the mutiny. The Sirdár has a fine house at Bulandshahr,

but generally resides at Khánpur. The population of Khánpur was in 1865 3,007, and in 1872 was 3,267, chiefly Musalmáns. A market is held every Tuesday; there is an Urdú halkabbandi or village school, a police-station, and a post-office in the town.

KHÚRJA, the capital of the tahsíl and parganah of the same name, is the largest and most flourishing town in the Bulandshahr district. It lies 10 miles south of the civil station, 30 miles north of Aligarh, 50 miles south of Meerut, and 50 miles south-east of Dehli. It is the largest commercial town between Dehli and Háthras, and is particularly well situated for purposes of trade. There are 22 wards in the town, named after their founder, or on account of some remarkable person or object connected with them. They are the Káyath, Madár Darwaza, Sarái Asmán Khán, Keshgiánn, Kot, Sarái Shaikh Abu, Shaikh Paín, Panjábiyan, Nawalpura, Sarái Nanpazán, Dhánganj, Fírúzganj, Malpura, Sarái Karori, Holi Brahmanán, Holi Baniyán, Chatta Devi Dás, Mughalpura, Ahmadganj, Makhdúmganj, Pírzáli, and Chauhata. None of these call for any particular notice. The two principal branches of the Grand Trunk Road, one from Dehli and one from Meerut, meet at Khúrja, and the East Indian Railway runs about three and a half miles to the south of the town, and is connected with it by a metalled road. The stone bench-mark of the Great Trigonometrical Survey is imbedded on the west side of the road opposite to the dák bungalow, about ten chains north of the junction of the roads from Dehli and Meerut to Agra, and shows a height of 647·76 feet above the level of the sea.

Population.

The population of Khúrja numbered 18,653 souls in 1847, in 1853 there were 22,147, and in 1865 there were 24,584 inhabitants. The site occupies 206 acres, giving 130 souls to the square acre. The census of 1872 shows 26,858 persons, of whom 15,543 were Hindús (7,388 females), and 11,315 were Musalmáns (5,700 females). Distributing the population amongst the rural and urban classes, the returns show amongst the residents, 20 landholders, 1,270 cultivators, and 25,568 persons pursuing avocations unconnected with the cultivation of the soil. The number of enclosures in Khúrja amounts to 2,641, of which 1,318 are occupied by Hindús. The separate houses number 4,801, of which 1,221 are built with skilled labour, and of these Hindús occupy 812; of the 3,580 mud huts 2,271 are owned by Hindús. Taking the male adult population only (not less than fifteen years of age), we find the following occupations pursued by more than fifty males:—Bangle-sellers, 124; barbers, 164; beggars, 329; bhúsa-sellers, 62; blacksmiths, 89; bricklayers, 93; brokers, 66; carpenters, 79; cultivators, 470; druggists, 117; goldsmiths, 74; grain parchers, 66; labourers, 1,624; cloth merchants, 190; money-lenders, 223; painters, 126; pandits, 67; porters, 136; potters, 91; priests, 76; servants,

1,481 ; shop-keepers, 1,304 ; sweepers, 268 ; singers, 51 ; tailors, 76 ; washermen, 122 ; water-carriers, 184 ; and weavers, 694. Education seems to be at a low ebb, as out of the whole population only 755 are returned as able to read and write. The principal inhabitants of the town are the Keshgi Patháns and the Churúwál Baniyas. The latter, are, as a rule, an extremely wealthy and enterprizing class, and carry on their banking business by means of paid agencies all over India. One of their number, Ami Chand, has an establishment in China, and another, Lálá Jogi Rám, is a well-known cotton factor. The Patháns of Khúrja are for the most part of the Keshgi tribe, which is not common in India ; they are a very influential class, and hold much house property in the town.

The site.

The site of Khúrja lies between the two branches of the Delhi road above mentioned, and is raised in the centre, tolerably level around it and low in the outskirts. From the Grand Trunk Road itself two principal ways of entrance pass into the town towards the east : one leads to the market-place, and the other to the *ganj*, and both are fairly wide, though tortuous. The road leading to the market-place soon opens into a space of no great extent, with masonry platforms along its centre way and poor shops around it. Beyond this the roadway opens again into an angular space, also of little extent, where a new tahsíli school-house is being built. From this the main bazar passes eastward as a narrow, rather tortuous roadway, fairly metalled, but the shops are rather poor. To one side of it, in the midst of the town, is the great Jain temple. Near the temple a very crooked metalled road finds its way southward from the tahsíli to the main road, and has few shops along it and no traffic of consequence. The main road goes to the east and makes its way to the Meerut road. Another tortuous lane, also well metalled and drained by saucer drains of brickwork, lies to the north-east of the town. The entrance from the Grand Trunk Road to the *ganj* commences with an open space of small extent, angular in shape, with shops on all sides, still being improved by the local Haussman. Hence the road continues northward as a wide street of shops which soon turn eastwards, and then again southwards, so that this part of the *ganj* partakes of the nature of a square having houses in the centre. The shops here are poor and roofed with old thatch. On the side going to the south is a *paráo* or halting-place for carts. From the *ganj* one line of road joins the market-place and another joins the main bazar. One of these is a bazar line of some importance. All the roads are metalled, high in the centre, with drains on each side.

Musalmáns inhabit the northern and eastern parts of the town, living in brick-built houses closely set together, and chiefly occupied in cultivation or service. The Hindús form the trading community, and live chiefly in the southern and western quarters. The line of the Grand Trunk Road has, somewhat, a dreary appearance, owing to the irregular digging of road-makers and the

poorness of the mud-built houses. The two greatest improvements of late years in Khúrja have been the general metalling and draining of all the principal streets, and the opening up of two metalled roads, one though the northern quarter of the town from the Grand Trunk Road to the present road, and another passing the tahsíli, which joins these two roads to the south ; neither, however, are of much value for business purposes. The Grand Trunk Road is highly raised and the drainage passes below it to the Ganda Nála, an almost levèl drainage channel connected with the Káron Nadi on the west. It is said that the Ganda Nála has only a fall of three inches in the mile; the result is that, in the rains, the drainage in times of heavy rainfall is much impeded, and water lodges often to a depth of three feet. This is remediable. To the east the drainage is still more imperfect. Here the water collects, in the portion through which the Meerut road passes, in a wide sheet, bût between it and the Káli runs the Ganges Canal, so that engineering in this direction is difficult. To the west, too, the impediments are not trivial, as the lines of both a rájbaha of the canal and the railway are both to be crossed. The town lands are irrigated from the canal, and the water level has risen from 24 feet in the dry weather to 15 feet, and from 18 feet in the rains to 10 feet, and with the rise the people say the water has become harder and food is more difficult of digestion. The wells and drainage from them are, however, carefully looked after, and little of the glaring absence of any attempt at conservancy so noticeable in the northern towns of the Duáb is to be found here. Since this notice has been in type, "the deplorable state of the town of Khúrja and the adjacent tract, consequent on the increased amount of liberated water which now flows down upon it from the Meerut district," has arrested the attention of Government, and a project is now being prepared for carrying off the surface water from the whole area lying between the canal and the Káron Nadi from Járcha down past Khúrja, to enter the Nadi again at the village of Johra, and for this purpose the bed of the river must be cleared and deepened.

Municipality.

A municipality has been in existence for some years in Khúrja, and Dr. Planck, in 1873, writes :—"I talked much with the people of Khúrja, and on no point received more general orpositive statements than concerning the satisfactory condition of the town now as compared with its state before municipal authority was established." The conservancy is carried out by a staff of fifty scavengers, with an overseer, and both outside and inside the town cleanliness is generally observed ; seventeen public latrines are placed in the outskirts, and are resorted to instead of the open ground. Spaces on all sides of the town are set apart for the accumulation of sweepings, which are removed and utilised. The limits of the municipality are defined by masonry pillars, and no one is allowed to dig and remove earth within them without special permission. Fever is common in the rains, and with so ill-drained a site it is not to be wondered at. The butchers'

slaughtering-houses have been removed outside the town, and altogether Khúrja is to be congratulated on the success obtained by local efforts. It is a pleasant sight to see the town lighted up of a dark night from its two hundred lamps, especially when the ordinary condition of a native town is remembered. The affairs of the municipality are managed by a committee consisting of nine members, of whom three hold office *ex-officio* and six are elected by the tax-payers. The income is derived from an octroi tax. The following statements show the receipts and expenditure of the funds and the quantity or value of the imports for the year 1872-73:—

Receipts.		1871-72	1872-73	1873-74	Expenditure.		1871-72	1872-73	1873-74
		Rs.	Rs.				Rs.	Rs.	
Opening balance,	...	20,187	16,208	8,940					
Octroi. Class I. Food and drink,		11,918	12,483	13,302	Collection,	...	2,716	2,783	2,788
II. Animals for slaughter,	...	188	179	207	*a* Head office,	...	637	641	462
III. Fuel, &c.,	...	1,441	2,170	2,123	*b.* Original works,		9,407	9,145	9,396
IV. Building materials,	...	1,674	1,308	1,373	*c.* Supervision, &c.		82		228
V. Drugs, spices,	...	2,614	2,050	1,531	Repairs, &c.,	...	3,131	6,278	1,454
VI. Tobacco,	...	103	96	149	Police,	...	4,950	4,916	4,903
VII. Textile fabrics,	...	1,423	1,723	1,824	Education,	..	480	328	428
VIII. Metals,	...	243	345	334	Conservancy,	...	3,566	3,577	3,837
Total of octroi,	...	19,654	20,354	20,843	Charitable grants,		490	679	678
Miscellaneous,	...	815	956	1,075	Lighting,	...	306	1,657	1,565
Rents,	...	846	1,064	1,080	Road watering,	...	...	143	317
Extraordinary,	...	1,012	372	826	Gardens,	...	626	8	98
Pounds,		323	271	261	Miscellaneous,	...	139	59	278
					Total,	...	26,629	30,285	26,302
Total,	..	42,837	39,225	33,025	Balance,	...	16,208	8,940	6,723

The following table shows the imports during 1872-73 of the articles that paid duty during that year and the average consumption per head of the population of each article. The exports were not recorded:—

Article.	Quantity imported.	Consumption per head.	Article.	Value imported.	Consumption per head.
	Mds.	Mds. s. c.		Rs.	Rs. a. p.
Wheat, ...	81,584	3 1 8	Fruits, *pán*, nuts, &c.,	22,123	...
Barley, ...	60,745	2 10 7½	Fodder, as chaff, *khal*, &c., ...	8,296	...
Joar, ...	1,402	0 1 10			
Bájra, ...	6,110	0 9 1½	Ghí, ...	87,885	3 4 4
Indian-corn, ...	4,838	0 7 3	Ráb and gúr, ...	1,02,975	3 13 4
Moth, ...	1,443	0 2 2½	Shira, ...	9,713	0 5 9
Gram, ...	16,118	0 24 0	Khand, ...	77,176	2 14 0
Urd, ...	4,362	0 6 8	Sugar (coarse), ...	1,02,777	3 13 2
Masúr, ...	831	0 1 4	Fuel, &c., ...	76,693	2 13 8
Múng, ...	6,449	0 9 9½	Building materials, ...	55,473	2 0 11
Arhar, ...	5,780	0 8 10	Drugs and spices, ..	71,571	2 10 8
Rice, ...	25,000	0 37 4	Tobacco, ...	3,078	0 1 10
		7 39 4	Manufactured cloth,	2,26,565	8 7 0
Vegetables, ...	5,624	...	Other cloths, ...	1,579	0 0 9
Reh and soap, ...	117	...	Metals, ...	46,466	1 11 8
				No.	
			Animals for slaughter,	6,125	...

These articles yielded a total tax of Rs. 20,355, giving an incidence of the tax amounting to twelve annas one pie per head of the population. The expenditure per head on sugar would show that much sugar in transit is taxed. The quantity of the imports under this head may be approximately estimated as follows:—*Gúr*, 25,734 maunds; *ráb*, 10; *shíra*, 4,856; and *khand*, 7,717 maunds, allowing Rs. 4 per maund for *gúr* and *ráb*, Rs. 2 for *shíra* and Rs. 10 for *khand*.

Local institutions.

The principal public institutions of Khúrja are the tahsíli, built in 1864 at a cost of Rs. 16,300, which contains the office of the sub-collector of the revenue for the tahsíl, a police-station, and a post-office. The dispensary was built in 1868 at a cost of Rs. 3,512, provided from local funds. The monthly expenses reach Rs. 70, of which Rs. 40, the pay of a Native Doctor, is defrayed by Government. It is a well-kept institution, and has accommodation for in-patients, to whom food as well as medicine is supplied. The town-hall was built in 1870 at a cost of Rs. 2,506 from municipal funds, and is the place where all public business is transacted. The tahsíli school, for which the building is not yet completed, is attended by 113 pupils who learn Urdu and Hindi. Its cost, Rs. 42 per mensem, is entirely defrayed by Government. An Anglo-vernacular school existed for some years, but in 1872 it was closed, as, though after repeated warnings, the amount of private subscriptions sufficient to keep it going could not be collected.

The Jain temple.

The principal building in the town is undoubtedly the new Jaina temple already mentioned. Before it has been completed it will cost upwards of a lakh of rupees. "The dome of the temple, with its gilded pinnacle, towers far above every other building in the town, and seen from a distance affords a conspicuous landmark. The entrance to the temple compound is not very pretentious, but, once inside, a very fine building, almost completely faced with richly carved stone, pierced here and there with ornamental lattices, presents itself to the view. The approach to the temple itself is by a flight of steps, which when we have surmounted we stand upon holy ground, and here visitors who decline to remove their shoes are supplied by the attendants with cloth buskins for drawing over the same, in order that the shrine may not be defiled. On entering the temple the first objects that strike the eye are the massive masonry pillars which support the roof. These are covered over with some kind of composition which glitters like marble and produces somewhat the same effect. The room itself is quadrilateral, with three pillars on each of the four sides. In the centre of the ceiling of the room, so to speak, the dome rises to a considerable height. The concave of the dome is painted and ornamented in the most florid style of Hindú decorative art. The paintings represent for the most part scenes in the life of the personages held sacred by the Saraugís, but have also certain

moral meanings of general application. The interstices between these paintings are filled up with mirrors set in frames of embossed flowers, scrolls, &c., which have a very pretty effect. Under the dome, however, rises the great feature of the temple—namely, a most exquisitely carved shrine of fine white marble, intended for the reception of the image of the god. This shrine has been overlaid richly with gold and colours, greatly to the detriment of effect. I saw the shrine in its simple state, where by its contrast with the florid embellishment of the dome it greatly enhanced the general beauty of the temple. Now all seems one blaze of gold and colours. The effect is of course very gorgeous, and without doubt pleasing to minds which rejoice in brilliant colouring. The temple is unique of its kind, and well worthy of a visit from the passer through Khúrja." Khúrja lies on the route from Aligarh to Dehli, distant 12½ miles from Somna towards Aligarh (see SOMNA) and 8 miles from Chola, the stage towards Dehli (see CHOLA). The encamping-ground lies between the bifurcation of the Dehli and Meerut roads to the south of the town.

Trade.

Some idea of the commercial importance of Khúrja may be gathered from the fact that it sends on an average every year one lakh of maunds of cotton to Cawnpore, Mirzapur, and Calcutta. The local trade consists principally of cotton, safflower, indigo; saccharine substances, such as *khand*, *gúr*, *rdb*, *chíni*, *misri*, and *shíra*; grain, rice, and *ghi* or clarified butter, in fact what is generically known as "country produce." The trade in cotton is the most important, and there are no less than eight cotton presses at work. The imports are principally English cloths, metals of all kinds, country cloth from Farukhabad and brass utensils from Mirzapur. There is also some local manufacture of country cloth and *dosúti*, but only for the poorer classes of residents of the town and neighbouring villages who throng the markets held here on Sundays and Thursdays.

History.

The name of Khúrja is said to have been originally *kharijah*,—that is, exempt from land-revenue, the founder, Sultan Fírúz Tughlak, having granted revenue-free tenures to the early settlers in 1342 A.D. Before Akbar's time the parganah head-quarters were at the village of Bhoti Sháhpur. Akbar transferred them to Khúrja, and the mahál of Khúrja paid him a yearly revenue of 37,07,020 *dáms*, or Rs. 1,85,351. The mahál was in the sirkár of Koil and súbah of Agra. The descendants of the original revenue-free grantees remained possessed of their holdings until the latter were resumed partly by Suraj Mal, Raja of Bhartpur, in 1749, and partly by Daulat Rao Sindhia towards the close of the last century. The fort of Manyi, about one mile to the south of Khúrja, was the head-quarters of the governor of the parganah before the English rule. The principal resident in Khúrja is Kunwar Azím Ali Khán, a Bhál Rajpút converted to Islám, and one of the largest talukadárs in the district. His Hindú clansman Chaudhri Udai

Singh comes next, and then the celebrated banker merchants Ami Chand and Jogi Rám. Azím Ali Khán keeps a large garden and house close to the town, which he places at the disposal of respectable travellers for a temporary stay. There is no really good sarái in the town, and it is well that the municipality intend to devote their spare funds to this purpose. The tomb of Makhdúm Sáhib, near the Grand Trunk Road, is the only remains of any date near the town, and this is only about 400 years old.

KHÚRJA, a parganah in the tahsíl of the same name in the Bulandshahr district, is bounded on three sides by other parganahs of the same district, and on the south by the Chandaus, Somna, and Barauli parganahs of the Aligarh district. According to the census of 1872 the parganah had a total area of 193 square miles, of which 137 square miles were under cultivation. The area assessed to Government revenue during the same year was 193 square miles, of which 137 square miles were cultivated, 51 square miles were culturable, and 5 square miles were barren.

General appearance.

The Káli Nadi forms the north-eastern boundary for a few miles, separating this parganah from Shikárpur. The *khádir* of the four villages bordering on the river has been ruined by its use as a canal escape.[1] The Káron Nadi passes through the western portion of the parganah nearly due north and south from point to point, but is very tortuous. It is a mere line of *jhíls*, forming a connected body of water only in the rains. It has lately been used as a canal escape, and, unless proper precautions be taken, it is feared that damage will be caused to the villages on its banks. Though a *seota* soil prevails, it is of an inferior quality and frequently very much mixed with white and yellow sand. Irrigation has much increased, and now covers nearly 48 per cent. of the cultivated area. The main Ganges Canal passes down the eastern portion, giving off the right and left Múnda Khera *rajbahas*; the Sahenda, Máman, Hasangarh, and right main *rajbahas*. The cultivated area in the parganah is, and always will be, large, owing to the extensive tracts of entirely barren usar lands and others covered with *dhák* jungle and interspersed with barren patches known as *shor* and *kalar*. The large *usar* plains become covered with a white efflorescence in the cold weather, which gives them the appearance of being covered with newly fallen snow, and often produces mirages like great sheets of water. Besides the ordinary cereals, pulses, and millets the only crop deserving special notice is indigo, the cultivation of which is steadily increasing. Safflower and cotton are both grown more than in the other parganahs of this tahsíl. The railway passes within three and a half miles of the town of Khúrja, with which it is connected by a metalled road. The Grand Trunk Road, too, bifurcates at Khúrja, one branch going to Meerut and the other to Dehli.

[1] In 1865, 688 acres were saturated with *reh*, which led to a remission of Rs. 862 per annum.

There are also good cross country roads connecting the town with others in this and the neighbouring districts. Khúrja itself is the largest and most important town in the district.

Fiscal history.

The settlement under Regulation IX. of 1833 by Messrs. Bird and Tonnochy was a light one, and was easily paid without any coercive process. The alienations that took place during its currency, though large, do not seem to have been due to any pressure of the assessment, but to the desire of the great landed proprietors to extend their possessions by advancing money on the security of landed property. Twenty-six villages and 78 portions of other villages were transferred by private sale, and 7 entire villages and 53 portions of villages by order of the civil courts. Of the 173 estates remaining in this parganah, in 1865, 103 were zamíndári, 57 were pattidári, and 13 were bháyachára. Of the last-mentioned 13 estates, 6 belonged to Badgújars, 2 each to Játs, Patháns, and Rajpúts, and one to Tagas. Altogether Bhál Rajpúts held 80 villages, Chauháns held 7, Badgújars 25, Jats 8, Baniyas 10, Jádons 3, Patháns 4; and the remainder belonged to Sayyids, Brahmans, Tagas, &c. 994 holdings were cultivated by proprietors, 1,030 by hereditary tenants, and 4,644 by tenants-at-will. The parganah was assessed by the late Mr. Lowe in 1861-62, and the new revenue came into force from the same year. Mr. Currie thinks that not more than 12,000 acres of the land entered as culturable in this parganah are really deserving of the name. The increase in irrigation has been very great, the well irrigated area having increased by over 10,000 acres. The following statement shows the statistics of the past and present settlements and the subsequent revision in 1871; the expiring revenue of the past settlement is given:—

Settlement.	Total area.	Barren and unassessable.	Culturable.	Cultivated.			Revenue with cesses.	Incidence of revenue and cesses on		
				Irrigated.	Dry.	Total.		Total area.	Entire culturable area.	Cultivated area.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Past, ...	120,653	6,289	38,005	21,798	54,562	76,360	1,28,403	1 1 0¾	1 1 11½	1 10 10¾
New, ...	123,176	10,054	32,010	38,626	42,486	81,112	1,39,655	1 2 2	1 3 9	1 11 6
1871, ...	123,176	10,054	32,010	38,625	42,487	81,112	1,49,110	1 3 4	1 5 1	1 13 4

The land-revenue for 1872, according to the census, amounted to Rs. 1,35,555 (or with cesses Rs. 1,49,136), falling at a rate of Re. 1-1-7 per British acre on the total area assumed above; at Re. 1-1-7 per acre on the area assessed to Government revenue, and at Re. 1-8-9 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 3,34,076.

Population.

According to the census of 1872 parganah Khúrja contained 159 inhabited villages, of which 32 had less than 200 inhabitants, 65 had between 200 and 500, 44 had between 500 and 1,000, 16 had between 1,000 and 2,000, and one had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Khúrja itself, with 26,858. The settlement records of 1865 show that there were then 162 villages on the register, distributed amongst 173 estates (maháls). The total population in 1872 numbered 107,221 souls (50,886 females), giving 556 to the square mile. Classified according to religion, there were 86,206 Hindús, of whom 40,562 were females and 21,015 Musalmáns, amongst whom 10,324 were females. Distributing the Hindú population amongst the four great classes, the census shows 10,084 Brahmans, of whom 4,700 were females; 15,818 Rajpúts, including 7,117 females; 7,834 Baniyas (3,826 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 52,470 souls, of whom 24,919 are females. The principal Brahman subdivisions found in this parganah are the Gaur (8,064) and Saraswat. The chief Rajpút clans are the Bhál, Chauhán (1,594), Badgújar (3,619), Jádon (3,652), Bais (225), Panwár, Kachhwáha, Gahlot, Jaiswár, Janghára, Gaur, Rawat, Báchhal, Bhadauriya, Solankhi, Bargala, and Chandel. The Baniyas belong to the Agarwál (3,215), Dasa (173), Bárasaini, Saraugi, Mahesri, Goráku, and Gandauriya subdivisions. The most numerous amongst the other castes are the Barhai (1,002), Kahár (2,221), Ját (5,078), Hajjám (1,689), Khatík (4,393), Chamár (18,089), Khákrob (2,934), Koli (4,229), Kumhár (1,396), and Máli (1,930). Bisides these the following castes comprising less than one thousand members are found in this parganah:—Lodha, Darzi, Kalál, Dhobi, Ahír, Garariya, Lohár, Sonár, Gosháin, Jogi, Dhúna, Bhat, Káyath, Bairági, Chhípi, Aheriya, Taga, Gújar, Orh, Joshi, Teli, Ráj, Kanjar, Bohra, Mochi, and Bhosiya. The Musalmáns are distributed amongst Shaikhs (1,290), Sayyids (330), Mughals (173), Patháns (1,529), and the remainder are entered without distinction.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 457 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 4,814 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 3,182 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 13,780 in agricultural operations; 4,606 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 6,463 persons returned as labourers and 896 as of no specified occupation. Taking the total population,

irrespective of age or sex, the same returns give 2,887 as landholders, 38,690 as cultivators, and 65,644 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,838 males as able to read and write out of a total male population numbering 56,335 souls.

History.

After the Dor Rajpúts came the Meos from Mewát, who spread over the country and became very powerful and annoying from their predatory habits. Ghaiás-ud-dín Tughlik led several expeditions against these Meos, and finally ousted them, with the assistance of the Bhál Rajpúts under Kírat Singh, the head of their clan, who received all the Mewáti villages as his reward. The parganah cultivators are still for the most part belonging to this tribe. The rest of the cultivating community consists of Chauháns, Jádons, Játs, Badgújars, Patháns, and Sayyids, as well as Brahmans and Tagas. Akbar attached the parganah to dastúr Thána Farída in sirkár Koil and súbah Agra. On the formation of the Bulandshahr district in 1824 it was transferred to that district, and then contained 138 villages. Several changes took place in 1844 and 1859, which resulted in increasing the number to 162. One of the sons of Kírat Singh, by name Khán Chand, turned Musalmán in order to get back his property from his brother Aswa Singh, who had deprived him of it, and ever since the descendants of the two brothers, large landed proprietors in the parganah, have remained, one Hindú and the other Musalmán.

KHÚRJA, a tahsíl in the Bulandshahr district, comprises the parganahs of Khúrja, Jewar, and Pahásu. The total area according to the census of 1872 contains 460 squares miles, of which 322 square miles are cultivated. The area assessed to Government revenue is given at 460 square miles, of which 322 square miles are cultivated, 123 square miles unculturable, and 15 square miles are barren. The land-revenue during the same year stood at Rs. 3,05,072 (or with cesses Rs. 3,35,615), falling at Re. 1-0-7 per acre on the total area, Re. 1-0-7 per acre on the area assessed to Government revenue, and Re. 1-7-8 on the cultivated area. The population numbered 221,176 souls (104,322 females), giving 481 to the square mile, distributed amongst 350 villages. The same statistics show 578 persons blind, 105 lepers, 22 insane persons, 8 idiots, and 40 deaf and dumb in the tahsíl. This tahsíl includes the south-western portion of the district. All other particulars concerning it will be found under the district and under the notices of the parganahs comprising it.

KOT, a small village in Dádri, is distant 17 miles from Bulandshahr. The population in 1872 numbered 903. There is a police-station here. The country in the neighbourhood has been considerably injured by the canal works, and a scheme has now been prepared to drain the whole tract lying between the main

canal and the Bulandshahr branch. The Collector reports that the villages around suffer so much from inundation that a great portion of their lands are not even ploughed for the *rabi* harvest; a branch cut from Hasanpur in the Meerut district will form a part of the scheme, and the drainage water will be discharged by the Kot escape into the Jumna.

KUCHCHESAR or Kuchesar, a village of parganah Sayána and tahsíli Baran of the Bulandshahr district, lies 21 miles north of the civil station. The population in 1865 was 3,078, and in 1872 was 3,177. The village is said to have been founded by Kanchan Sáh, a wealthy banker of Dehli at an unknown date. The mud fort constructed by Rao Ramdhan Singh, great-grandfather of the present proprietor, is now out of repair, but it has a very commanding position. This village is the head-quarters of the Ráís of Kuchchesar (see district notice). The estate consists of some 270 villages in this district, Meerut, and Moradabad. Kuchchesar itself is held revenue-free in perpetuity under a grant from Lord Moira, dated 10th May, 1816. The family is of the Ját caste, and recently the estate has been divided amongst the heirs.

MAKANPUR, the ghát on the Jumna in parganah Dankaur, is distant 26 miles from Bulandshahr. The village has a population of 887 souls, and contains a small police-station. Makanpur is the principal ghát on the Jumna in this district.

MÁLÁGARH, a village of parganah Agauta in the Bulandshahr district, is distant 38 miles south-east from Dehli and 4 miles to the north from the civil station. The population in 1872 numbered 1,886 souls. The village though small is a large grain depôt, and has a market on Sundays. There is a small village school here. Málágarh was formerly known as Rathora, and belonged to the Gorwa or Gaurwa Rajpúts. A short time before the Marhatta ascendancy, Hakdád Khán, a Khátak Pathán and Amil of Baran, purchased the rights of the Rajpúts and built a mud fort and a *ganj* or market here. He changed the name to Málágarh in honour of Sayyid Muhammad Kirmáni, surnamed Málámál, whose tomb is in Gathauli Khurd close by. The Amil resided here until dispossessed by the Marhattas in 1792. At the conquest in 1803 Mádho Rao Phalkiya was the Marhatta jágírdár of Málágarh. He opposed the new Government, and ordered Colonel James Skinner, who then held Sikandarabad on the part of the British, to leave the *jáyír*. Colonel Skinner had only 1,200 irregular cavalry, without infantry or guns, and in reply to the Marhatta's demand ordered him to give up the fort. The result was that Mádho Ráo marched with a force of about 800 infantry, 500 horse and 2 guns against Skinner's encampment. In the action that ensued Skinner lost 200 men, but the Marhatta infantry were almost annihilated. Colonel Skinner then invested the fort, and at length Madho Rao surrendered, and his son was received into the British service with

the command of 600 horse. Bahádur Khán[1], the son of Hakdád Khán, now made pretensions to the proprietary right in the town, and received from the British the lease of this and 35 other villages at a fixed revenue of Rs. 5,000 per annum. Bahádur Khán died in 1824, and the lease lapsed. An allowance of Rs. 1,000 a year was made to Walidád Khán, son of Bahádur Khán, then a minor, whilst the villages were settled with the original proprietors.[2] Walidád Khán continued in receipt of this allowance up to 1857 A.D. His sister's daughter had married Mirza Jawán Bakht, a son of the King of Dehli, in 1852, and on this account, at the outbreak in 1857, he was appointed súbahdár of Baran and Koil by the rebel king. On the fall of Dehli, Walidád's forces were defeated by Colonel Greathed's column at Bulandshahr, and his fort was taken and razed to the ground. It was in the operations rendered necessary for the purpose of blowing up the fort that the hero of the Dehli Kashmír gate, Lieutenant Charles Dunçan Home, R.E., lost his life. His remains are interred in the little European graveyard at Bulandshahr. In 1858 the proprietary right in half Málágarh was conferred upon Mahmúd Ali of Chatári.

MALAKPUR, a town of parganah Anúpshahr and tahsíl Anúpshahr of the Bulandshahr district, lies 20 miles east of the civil station and five miles south-west from Anúpshahr. The population in 1865 was 2,215, and in 1872, 2,674. There is a market on Fridays, and a halkahbandi or village school. In Akbar's time Malakpur was the head of a mahál, paying a yearly revenue of 14,46,132 *dáms*, or Rs. 72,306, in sirkár Koil and súbah Agra. During Jahángír's reign, when the new parganah of Anúpshahr was formed, a large number of villages were taken from Malakpur to be added to Anúpshahr. In the commencement of the British rule Malakpur and Anúpshahr were separate parganahs, but in a subsequent arrangement the former was absorbed into the latter. For some time after the conquest Ahár-Malakpur was the joint name of the parganah. The founder of Malakpur is said to have been an Afghán, named Malik Samandar Khán, who lived during the rule of the Khiljis. His descendants were proprietors of several villages in the parganah up to the time of the introduction of the British rule. A few years after the cession Malakpur was the head-quarters of the Mercer estate, consisting of thirty-two villages purchased by Mercer and Co., indigo-planters, from the descendants of Malik Samandar Khán and others. The indigo concern failed, and the estate was purchased by Abdul Rahman Khán, father of the present proprietor (Faiz Ahmad Khán). The

[1] Bahádur Khán was popularly designated one of the *nimak-harám* of Sindhia's Court. It was he that was appointed to make away with General Perron when Sindhia became jealous of the General's influence shortly before the battle of Aligarh. Perron was warned in time, and Sindhia himself is said to have abandoned the idea. The three men Hakdád, Bahádur and Walidád have the character of being most unscrupulous amongst a people little given to make fine distinctions in matters of honour. [2] See Board's Rec., August 8, 1825, No. 1; September 12, Nos. 3, 4; April 20, 1826, No. 4.

first settlement of the parganah were made in the Moradabad district, of which it was a part according to the cession by the Nawáb Vazír.

MÁMAN KHURD, a village in parganah Baran, is distant five miles from Bulandshahr. The population in 1872 was 505. There is a police-station here.

MITHTHEPUR or Makhdumnagar, a village in parganah Agauta, is distant 13 miles from Bulandshahr. The population in 1872 numbered 352 souls. The village was formerly held entirely free of revenue, but one-half of it was confiscated for the rebellion of Chirágh Ali in 1857. The remaining half is held free of revenue in perpetuity by a Sayyid family, who are also the owners of the proprietary right. The nominal revenue on which the cesses are collected amounts to Rs. 325 per annum.

PINDRÁWAL, a village of parganah Pahásu and tahsíl Khúrja of the Bulandshahr district, lies on the Káli Nadi, 9 miles south-east of Pahásu and 30 miles south-east of the civil station close to the Aligarh road. The population in 1865 was 2,514 and in 1872 was 3,059. There is a market on Wednesdays, and a halkahbandi or village school. The Ráipur Station on the Oudh and Rohilkhand Railway is about three miles from Pindráwal. The name is said to be derived from the words "*Pind*" and "*Ráwal*"; the former meaning, a village, and the latter being an honorific title like Rao. Pindráwal was founded by some Ráwal of the Meo tribe about the twelfth century. It was included in the Badgújar Lálkháni taluka of Pítampur, and has recently come into the hands of Bákir Ali Khán, son-in-law of Akbar Ali Khán, the former proprietor. He is an Honorary Magistrate, and one of the largest proprietors in the district. A village police numbering five men was entertained at a cost of Rs. 240 per annum in 1873.

PAHÁSU, a town in the parganah of the same name in the Bulandshahr district, is situated on the right bank of the Káli river, 24 miles south of the civil station and 14 miles south-east of Khúrja. The population in 1865 numbered 3,776, and in 1872 there were 4,204 inhabitants, chiefly Rajpúts and Musalmáns. The road from Chatári passes through the town, which possesses a police-station, post-office, and a village school; a market is held on Sundays and Wednesdays; a small canal distributary passes close to the town site. The old name of the town is said to be Pahi Asrám, or the colony of those who cultivate lands in other villages. Partáp Singh, one of the first Badgújar immigrants into the Duáb, made it his capital. In Akbar's time it became the head of a mahál or parganah belonging to sirkár Koil and súbah Agra, and yielded a revenue of 25,02,562 *dáms*, or about Rs. 1,25,128. The parganah, containing 54 villages, was conferred by Sháh Alam on Begam Sumru as a *jágír* for the support of her troops, and the town was the seat of her amil or collector. The British Government continued the grants which lapsed on the death

of the Begam in 1836. For some time, as no one claimed the proprietary right, the town was held by Government direct, and was subsequently given to Murád Ali Khán, Lálkháni, in 1851. The present proprietors are Nawáb Faiz Ali Khán, C.S.I., and Imdád Ali Khán. The former is the prime-minister of the Jaipur State, and a man of considerable note.

PAHÁSU, a parganah of tahsil Khúrja of the Bulandshahr district, is bounded on three sides by the parganahs of the same district, and on the south by parganahs Barauli, Koil, and Murthal of the Aligarh district. According to the census of 1872 this parganah had, then, a total area of 127 square miles, of which 86 square miles were under cultivation. The area assessed to Government revenue during the same year was 127 square miles, of which 86 square miles were cultivated, 37 square miles were culturable, and 4 square miles were barren.

General appearance.

The Káli Nadi flows through this parganah in a south-easterly direction, and divides it into two almost equal parts. The *khádir* of the Káli was formerly noted for its richness and fertility. Of late years it has much deteriorated owing to the use of the Káli as a canal escape, and in twelve villages more or less remission of revenue was made in 1865. The main Ganges Canal and several rájbahas traverse the western portion of the parganah, and down to about half way between Chatári and Pahásu there is much irrigation. The soil is better here than in the eastern portion of the parganah, and the few patches of sandy soil to be met with are seldom a really bad soil for cultivation. On the eastern side there is less irrigation, and temporary wells do not succeed. Along the eastern bank of the Káli, below Pahásu and the *nálas* which flow into it opposite Náru, there are large tracts of uncultivated land covered with long grass, used for thatching. Near Ahmadgarh, and for several miles along the edge of the parganah, there is an almost continuous tract of *dhák* jungle interspersed with *úsar* and barren patches. In the western portion there are large *úsar* plains included in the culturable area. The common products are cereals, millets, and pulses. There is an indigo factory at Chatári. There are no important roads except the Anúpshahr metalled road passing through Chatári, and there is little or no traffic of any importance. The principal towns are Pahásu, Chatári, and Amádgarh.

Fiscal history.

The first settlement of the parganah was made by Mr. Tonnochy soon after its lapse on the death of Begam Sumru, but since then the actual boundaries have been very considerably altered. During the currency of the past settlement no coercive process has been found necessary for the recovery of the land-revenue, but private transfers have been numerous; much of these have been due to the desire of the large landed proprietors to extend their estates. Sixteen out of the 26 villages entered as transferred by private arrangement comprise those villages conferred by a deed of gift on Bákir Ali Khán by his mother. Portions of 23 other villages changed

hands by private arrangement, whilst only two entire villages and portions of twelve others changed owners byorders of the civil courts. Out of the 109 estates in the parganah, 80 are held on a zamíndári tenure, 26 are pattidári, and 3 are bháyachára. 287 holdings are cultivated by proprietors, 725 by hereditary tenants, and 4,618 by tenants-at-will. The cultivators of the parganah are, as a rule, badly off, and as much as they can pay is extracted from them. The new assessment was made by the late Mr. G. Freeling in 1860-61. The following statement gives the statistics of the past and new settlements, and those collected at the revision in 1871 the expiring revenue of the past settlement is given.

Settlement.	Total area.	Barren and unassessable.	Culturable.	*Cultivated.*			Revenue with cesses.	*Incidence of revenue and cesses on*		
				Irrigated.	Dry.	Total.		Total area.	Entire culturable area.	Cultivated area.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Past,	79,941	10,192	20,973	13,791	34,985	48,776	76,125	0 14 11	1 1 1¼	1 8 5
New,	81,369	5,115	21,791	23,557	30,906	54,463	86,694	1 1 1	1 2 2	1 9 9
1871,	81,367	5,116	21,785	23,557	30,909	54,466	92,730	1 2 3	1 3 5	1 11 2

The land-revenue for 1872 amounted to Rs. 84,300 (or with cesses Rs. 92,732), falling at a rate of Re. 1-0-7 per British acre on the total area, at Re. 1-0-7 per acre on the area assessed to Government revenue, and at Re. 1-8-6 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 200,389.

Population.

According to the census of 1872 parganah Pahásu contained 100 inhabited villages, of which 25 had less than 200 inhabitants, 41 had between 200 and 500, 24 had between 500 and 1,000, 4 had between 1,000 and 2,000, 3 had between 2,000 and 3,000, and 3 had between 3,000 and 5,000. The settlement records show that in 1865 there were 103 villages in this parganah, distributed amongst 109 maháls or estates. The total population in 1872 numbered 56,636 souls (26,656 females), giving 446 to the square mile. Classified according to religion, there were 48,590 Hindús, of whom 22,765 were females and 8,046 Musalmáns, amongst whom 3,891 were females. Distributing the Hindú population amongst the four great classes, the census shows 8,021 Brahmans, of whom 3,748 were females; 6,688 Rajpúts, including 3,014 females; 2,736 Baniyas (1,317 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 31,145 souls, of whom 14,686 are females. The principal Brahman subdivisions found in this parganah are the Gaur (5,729), Sanádh, Bhat, Upadhiya, and Páthak. The chief Rajpút clans are the Chauhán (647), Badgújar (2,984), Jádon (1,399), Bais (47), Panwár, Gahlot, Kachhwáha,

Janwár, Janghára, Ráthor, Marwári, and Mathuriya. The Baniyas belong to the Agarwál (661), Dása (216), Bárasaini, Dhanu, and Jaiswál subdivisions. The most numerous among the other castes are the Lodha (1,258), Kahár (2,070), Ját (1,456), Hajjám (11,99), Khatík (2,065), Chamár (9,324), Khákrob (1,493), Garariya (2,126), and Koli (1,694). Besides the above castes the following are found with less than one thousand members each:—Darzi, Kalál, Barhai, Dhobi, Ahír, Lohár, Kumhár, Sonár, Gosháin, Jogi, Dhúna, Bhat, Káyath, Bharbhúnja, Bairági, Máli, Chhípi, Gújar, Orh, Joshi, Mína, Bohra, Kúrmi, Káchhi, Khattri, Mochi, and Banjára. The Musalmáns are distributed amongst Shaikhs (1,234), Sayyids (111), Páthans (548), converted Hindús (232), and the remainder are entered without distinction. The cultivators of this parganah are badly off, and are forced to pay the very highest rents that can be got out of them. Badgújars, both Musalmán and Hindú, are the most noteworthy amongst the cultivators.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 149 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 2,443 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,155 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 8,805 in agricultural operations; 2,022 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 3,180 persons returned as labourers, and 348 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 1,088 as landholders, 25,882 as cultivators, and 29,666 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,166 males as able to read and write out of a total male population numbering 29,980 souls.

History.

The Meos were the dominant race and proprietors of this part of the country, and were expelled by the Badgújar Raja Partáp Singh, the ancestor of the Lálkháni family. Akbar attached the mahál to dastúr Thána Farída in sirkár Koil and súbah Agra. It was given as a *jágír* to Begam Sumru in Sháh Alam's reign, and continued to her by the British for her life. In 1836 the grant lapsed, and the parganah, then consisting of 54 villages, was annexed to Bulandshahr. In 1844, at the revision of parganahs, 28 villages were annexed to the neighbouring parganahs, 52 villages were received from taluka Pítámpur of parganah Dibái; Ahmadgarh and six other villages from Anúpshahr, and 18 villages from the Aligarh district,[1] making altogether 103 villages as at present. In 1859 the parganah was transferred

[1] G. O. No. 1159, dated March 8, 1854.

from the Dibái to the Khúrja tahsíl. Badgújars hold 83 villages, Khattris 6, Europeans 4, Brahmans 4, and various castes 5 villages.

RABÚPURA, a town situated about 19 miles south-west of Bulandshahr, lies in parganah Jewar and tahsíl Khúrja of the Bulandshahr district, three miles east of the Jumna. The population in 1865 was 3,371, and in 1872 was 4,203. There is a village school here. The town is chiefly celebrated for a bullock market held every Monday, and for having given a proverb connected with a transaction in the same to the district. The proverb runs as follows: "*Rabúpura ki penth men main kiska phúpha húnri.*" "In Rabúpura's fair to-day, of whom am I the uncle, pray?" The story which gave rise to the proverb is, that once upon a time a fair, but deceitful, damsel addressing a pedlar in the fair as her "*phúpha*" or uncle, bought some goods from him on credit, promising to pay him the next market day. The man did not know the girl, but believing that she actually was, as she represented herself to be, his relative, and not wishing to offend her, he let her have the goods. The next market day he began to search for the lady among the crowd, and not finding her, addressed every female he met with the words above quoted. The proverb is applied in derision to those who give credit to strangers. The founder of this village was a Mewáti named Rabu, who flourished during the ascendancy of his clan about 800 years ago. The Mewátis were ousted by the Jaiswár Rajpúts in the days of Prithiráj. From Sháh Alam's time up to 1857 Rabúpura was the centre of the estate comprising 24 villages, and commonly called the crown lands *(taiyúl shiháis)*, which were confiscated after the mutiny.

RÁMGHÁT, a village of parganah Dibái of the Bulandshahr district, is situated on the right bank of the Ganges about 20 miles south-east of Anúpshahr, 42 miles south-east of Bulandshahr, and 80 miles south-east of Dehli on the Aligarh road. The population in 1865 numbered 4,800 souls, and in 1872 there were only 2,776 inhabitants, chiefly Brahmans and Baniyas, and 864 houses. The reason of the decrease is possibly the fact that the river has taken a course which promises, in a few years, to wash away the town altogether. Rámghát is one of the sacred ghats to which pilgrims resort from all parts of India to bathe in the Ganges. The principal occasions when large crowds assemble are the *Somwáti amáwas*, or last day of the lunar month when it falls on a Monday; the full moons of Kárttik and Baisákh; the ninth day of the light half of Jeth, and the conjunction of certain planets with certain others or with certain points of the zodiac. The road from Aligarh to Islámnagar passes through the village and crosses the Ganges by a bridge-of-boats which is kept up for eight months of the year. There is a considerable through trade with Rohilkhand, and by boat with Benares and Mirzapur in wheat and wool. There is a girls' school, a halkahbandi or village school, a police-station and a post-office. Act XX. of 1856 is in force, and in 1872-73 supported a village police

numbering 13 men at an annual cost of Rs. 720, besides a number of scavengers. The cost is defrayed from a house-tax, which during the same year yielded a revenue of Rs. 1,255, or Re. 0-7-3 per head of the population and Re. 1-7-3 per house assessed (764). The expenditure in 1872-73 amounted to Rs. 1,368, met from the annual income and a balance of Rs. 335 from the previous year. Rámghát is noted for the defeat of the Marhattas by a combined British and Oudh force in 1763 A.D. There are a number of Hindú temples here, but there are none with any remarkable architectural features. The town is said to have been founded by Bálárama, the brother of Krishna, after the defeat of the demon Kolásur at Koil. The proprietary rights in the town belong to the Musalmán Badgújar Zabúr Ali Khán, who purchased them at auction from Rao Daulat Singh in 1815 A.D.

SARAI SADR, a village in parganah Dádri of the Bulandshahr district, is situated 6 miles to the west of Surajpur in the same parganah, and 33 miles from Bulandshahr. The population in 1872 was 213. It is chiefly noticeable as the site of the battle between the Marhattas and British on the 12th September, 1803, shortly after the capture of Aligarh, and of which the only remains are the tomb of an officer on a plain between the villages of Chalahra and Nayabás, about two miles from the village of Sarái Sadr. An inscription on one of the gates shows that the village was occupied or founded by one Háji Sadr Sháh in the reign of Aurangzíb in 1116 H. (1704 A.D.) A mosque, in bad repair, bears date 1133 H. (1720 A.D.) in the reign of Muhammad Sháh. There is a police-station here.

SAYÁNA, an old town in the parganah of the same name and tahsil of Baran in the Bulandshahr district, is situated 19 miles to the north-east of Bulandshahr on the Garhmuktesar road. The population of Sayána in 1847 was 5,744 souls, in 1853 was 5,841, and in 1865 was 5,966. In 1872 there were 6,268 inhabitants, of whom 4,095 were Hindús (1,964 females) and 2,173 were Musalmáns (1,084 females), principally descendants of one Abul Fath. The business part of the town consists of a poor *mandi* or market in the eastern outskirt, from which two ways go up westward to the houses. The shops and houses are poor and ill-kept, and the streets are crooked and ill-made. Altogether the town is a poor place, with only 18 brick-built houses out of 1,417 in all. The small lanes are mere depressed waterways. The majority of the population are Hindú cultivators, and about two-thirds of the township is irrigated from the canal. The town site is somewhat raised and drains towards some excavations on the north. Well-water is 24 feet from the surface, and has risen since the introduction of canal-irrigation, fourteen years ago, by about four feet. The names of the wards are for the most part personal and modern: they are Pattis Desh, Mírathsára, Kazi Kel, Rám Ratan, Gulzári, Sadhú

The site.

Sarái, Bábunpuri, Musalmán, Harnám Singh, and Rádhi. The only public institutions are a police-station, post-office, and a halkahbandi or village school. There is an indigo factory, a bazar, and a market is held on Wednesdays, where safflower is a staple article of trade. Act XX. of 1856 (the Chaukidári Act) is in force, and in 1872-73 supported a village police numbering 13 men at an annual cost of Rs. 720, besides eleven sweepers. This charge is defrayed from a house-tax, which yielded during the same year a revenue of Rs. 1,744, with a balance of Rs. 1,162 from the previous year. The expenditure on all accounts amounted to Rs. 2,515. The site occupies 65 acres, giving 96 souls to the square acre. The tax falls at Re. 0-4-2 per head of the population and Re. 1-3-3 per house assessed (1,392).

History.

The ancient name of the site is said to have been Sainban, or the forest of rest, so called because Bálárám, on his way from Muttra to Hastinápur, slept here for one night and was hospitably entertained by the fakírs who lived here and had built a tank in the centre of a vast forest. The name was changed to Sayána during the rule of the Dor Rajpúts. The Dors were succeeded by the Taga Brahmans, who with the aid and at the instigation of Prithiráj of Dehli are said to have usurped the authority of the Dors and to have expelled them from their possessions. These Tagas were in turn partially expelled by the Shaikhs under Abdul Fath, Fakír, in the reign of Alá-ud-dín Ghori. The Tagas are still zamíndárs in the town, but the majority of them were converted to Muhammadanism in or about the time of Akbar. The Shaikhs, too, hold revenue-free grants. Mahál Sayána in Akbar's time was included in sirkár and súbah Dehli, and yielded a revenue of 20,49,090 *dáms*, or about Rs. 1,02,454. The Anúpshahr branch of the Ganges Canal runs close to the town, but is insufficient for the purposes of irrigation; a *rajbaha*, in part, answers this purpose. Sayána was till 1844 the seat of a tahsíli, and up to a few years previous had a munsifi.

SAYÁNA, a parganah of tahsíl Baran of the Bulandshahr district, is bounded on the north by the Garhmuktesar, Púth and Hápur parganahs of the Meerut district, on the east by the Ganges, and on the west and south by parganahs Agauta, Baran, and Ahár of this district. In 1872 the total area, by the census returns, amounted to 140 square miles, of which 106 square miles were under cultivation. The area assessed to Government revenue during the same year was 134 square miles, of which 102 square miles were cultivated, 21 square miles were culturable, and 11 square miles were barren.

Only one village abuts upon the Ganges. The nature and quality of the soil and the facilities for irrigation vary in different parts of the parganah. To the east the soil is, as a rule, light and sandy, and the water is at a much lower level than elsewhere, so that there is very little irrigation. Down the centre

the soil is light and crumbling, and the water-level higher, admitting of the construction of *kuchcha* wells, but here too there are unirrigable tracts of sandy soil. To the west the soil is firmer and the water nearer the surface: so that temporary wells abound. There are three *rajbahas* in this parganah, two extending from the Meerut district and passing on to Ahár, and one from the Anúpshahr branch canal. There are no important roads in the parganah. The chief products are wheat, barley, gram, and a little tobacco and sugar-cane. The principal villages are Sayána, Bagrási, and Kuchchesar. The Ját proprietors of the Kuchchesar estate, consisting of some 270 villages in this district, Meerut, and Moradabad, reside here and own 56 villages in this parganah. The Tagas once held 83 villages, and now have only four entire villages and portions of 11 others. Six entire villages are owned by Patháns, and Bagrási and Jalálpur belong to the Pathán Bárah Basti. The cultivators are generally Játs, and all classes seem to be industrious, for, as a rule, the villages are well cultivated and cared for, and the people are well off.

Fiscal history.

The past settlement[1] of this parganah was made by the late Sir H. M. Elliot in 1835. Owing to the concealment of irrigation from wells throughout the Kuchchesar estate, the assessment was heavy on the eastern and inferior portion of the parganah, very fair and adequate, on the whole, on the central portion, and very light on the western tract. The influence of the Kuchchesar Raja and Abdul Latíf Khán of Khánpur was more felt, however, in transfers. Both vied with each other in getting a footing in every village either as vendees or mortgagees, and out of the whole of the changes in proprietary rights during the currency of the past settlement, not more than 13 portions of villages transferred by private sale and 14 portions of villages transferred by orders of the civil courts can be set down to the pressure of the assessment. Out of 90 estates in the parganah in 1865, 75 were zamíndári, 7 were pattidári, and 8 were bháyachára; 578 holdings were cultivated by proprietors, 2,094 by hereditary tenants, and 3,713 by tenants-at-will. The new assessment was made by Mr. R. Currie in 1861-62, and came into force from the following year. The following statement shows the statistics connected with the settlements past and present and those collected at the revision in 1871; the expiring revenue of the past settlement is given:—

Settlement.	Total area.	Barren and unassessable.	Culturable.	Cultivated.			Revenue with cesses.	Incidence of revenue and cesses on		
				Irrigated.	Dry.	Total.		Total area.	Entire culturable area.	Cultivated area.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p	Rs. a. p.	Rs. a. p.
Past,	88,842	11,627	23,675	10,787	42,753	53,540	91,894	1 0 6	1 3 0½	1 11 5
New,	89,757	11,256	19,439	19 057	40,005	59,062	1,02,309	1 2 3	1 4 10	1 11 8
1871,	89,822	11,246	19,494	19,068	40,004	59,062	1,08,878	1 3 5	1 6 2	1 13 6

[1] Set. Rep., I., 169.

The land-revenue for 1872 amounted to Rs. 98,980 (or with cesses Rs. 1,09,425), falling at a rate of Re. 1-1-8 per British acre on the total area, at Re. 1-2-6 per acre on the area assessed to Government revenue, and at Re. 1-7-4 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 1,99,758.

Population.

According to the census of 1872 parganah Sayána contained 81 inhabited villages, of which 13 had less than 200 inhabitants, 24 had between 200 and 500, 25 had between 500 and 1,000, 10 had between 1,000 and 2,000, 6 had between 2,000 and 3,000, and two had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Sayána itself, with6 ,268. The register of proprietors in 1865 shows that there were, then, 83 villages distributed amongst 90 estates. The total population in 1872 numbered 69,451 souls (33,155 females), giving 496 to the square mile. Classified according to religion, there were 59,088 Hindús, of whom 28,070 were females; 10,358 Musalmáns, amongst whom 5,084 were females; and there were 5 Christians. Distributing the Hindú population amongst the four great classes, the census shows 7,590 Brahmans, of whom 3,753 were females; 1,253 Rajpúts, including 552 females; 2,701 Baniyas (1,234 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 47,544 souls, of whom 22,531 are females. The principal Brahman subdivisions found in this parganah are the Gaur (6,709), Gujráti, Bhat, Nágar, and Gautam. The chief Rajpút clans are the Chauhán (453), Badgújar (309), Panwár, Jádon, (82), Bais, (127), Tonwár, and Chaurathiya. The Baniyas belong to the Agarwál (2,087), Dasa (93), and Rastaugi subdivisions. Amongst the other castes, the most numerous are the Lodha (6,453), Kahár (1,370), Ját (9,543), Hajjám (1,124), Chamár (11,780), Khákrob (2,364), Kumhár (1,275), and Taga (4,014). Besides the above the following castes are found with less than one thousand members each:—Darzi, Barhai, Khatík, Dhobi, Ahír, Garariya, Lohár, Koli, Sonár, Gosháin, Jogi, Dhúna, Bhat, Káyath, Bharbhúnja, Bairági, Máli, Chhípi, Aheriya, Gújar, Orh, Joshi, Chauhán, Khattri, Ghosi, and Khaga. The Musalmán population is distributed amongst Shaikhs (513), Sayyids (139), Patháns (1,021), and the remainder are given without distinction.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 292 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 2,420 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,188 in commerce,

in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 10,426 in agricultural operations; 3,471 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 3,035 persons returned as labourers and 486 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 2,818 as landholders, 31,465 as cultivators, and 35,168 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,779 males as able to read and write out of a total male population numbering 36,296 souls.

History.

In Prithiráj's time the parganah was known as tappa Sayána, containing a *chaurási* of Taga villages. Akbar formed it into a parganah attached to dastúr Baran of sirkár and súbah Dehli. In 1803 it was annexed to the southern division of the Saháranpur district (Meerut), and up to the end of 1816 was held on a fixed rent by Rao Ramdhan Singh of Kuchchesar. On his death in the Meerut jail the villages were settled with their proprietors, and Kuchchesar was granted revenue-free to Ramdhan Singh's heirs. In 1844 Sayána, containing 117 villages and hamlets, was transferred to Bulandshahr, when by absorption of the hamlets the villages were reduced to 83, their present number.

SENTHA, a village in parganah Agauta of the Bulandshahr district, lies 12 miles from Bulandshahr. The population of Sentha, including three hamlets in 1872, was 1,323. This village in the time of Akbar gave its name to the parganah, and continued to be the head town until the Marhattas removed the seat of the amil to Agautá, since then the parganah capital. The Chauháns originally owned the village, but their rights have passed into the hands of the Sayyids, one of whom, by name Jahángír Ali, obtained a grant of 1,400 bíghas revenue-free in the reign of Akbar. His descendant Fyáz Ali holds 760 bíghas on life tenure. The village has a good sized bazar. The Sayyids of Sentha came from Sabzwár in Turkistán during the rule of the Tughlik dynasty.

Population.

SHIKÁRPUR, the chief town of the parganah of the same name in the Bulandshahr district, lies 13 miles south-east of Bulandshahr on the Rámghát road. In 1847 the town had 9,838 inhabitants, in 1853 the population numbered 11,065, and in 1865 there were 10,182 inhabitants. The site occupies 115 square acres, giving 97 souls to the acre. According to the census of 1872, there were 11,150 inhabitants, of whom 6,227 were Hindús (3,005 females) and 4,923 were Musalmáns (2,466 females). Distributing the population amongst the rural and urban classes, the returns show 386 landholders, 1,585 cultivators, and 9,367 persons pursuing callings unconnected with agriculture. The number of enclosures in 1872 was 1,048, of which 520 were occupied by Musalmáns. The number of houses during

the same year was 2,187, of which 560 were built with skilled labour, and of these 182 were occupied by Musalmáns. Of the 1,627 mud huts in the town 747 were owned by the same religionists. Taking the male adult population (not less than fifteen years of age) we find the following occupations pursued by more than fifty males:—Barbers, 66; butchers, 82; carpenters, 54; cultivators, 518; druggists, 194; labourers, 530; landowners, 110: potters, 76; servants, 388; shopkeepers, 406; shoemakers, 57; sweepers, 68; water-carriers, 56; and weavers, 441. The educational statistics show only 277 males out of the total population as able to read and write; of these 47 were Musalmáns.

The land upon which the town is built formerly belonged to village Govindpur Kantáin. The principal wards of the town are the chauk and sarái founded by the father of Chaudhri Lachhman Singh some 55 years ago; the Munhtarpura, a name said to have been given by Sikandar Lodi to the muhalla where the bad characters lived: "Munh-tarra" means vicious faced, and the term "*tarra*" is usually applied to a vicious horse; Ganj nau and Kot kalán, founded by Dildár Ali, a Sayyid of note, some 150 years ago; his descendants behaved badly in the mutiny and lost their property in consequence; the Rang mahál, called so in honour of a lady of that name, Dildár Ali's wife; the Kutb Darwáza is so called because at the gate of the muhalla there is a dargáh of one Kutb Sáhib, a renowned fakír of the locality; the Lál Darwáza ward is so called because the walls of the gate are of red sandstone; Káziwára is called after the family of the Kázis settled here by Sikandar Lodi: Kázi Rukn-ud-dín is the present representative of the family; the ward Muftiwára, or the quarter of the Muftis, like the preceding and kánúngo ward, are named after the more distinguished of the inhabitants who were a kind of under-Kázi; and ward Kel kalán is named after the keldár, an officer under Sikandar Lodi, resembling somewhat a mír muhalla. The holders of the office of keldár were Shaikhs, and it is said that their adherents once upon a time attacked the ancient Hindú Chaudhris and slaughtered them in great numbers. There is a slab of stone in this muhalla under which the murdered Chaudhris are said to have been buried by their enemies. The people appear to be stupid, and have the nickname *chútiya* applied to them by their neighbours.

Principal families.

During the Muhammadan period the Sayyids were the most influential inhabitants; they are still held in some repute and hold a few revenue-free patches, but the majority of them behaved badly in the mutiny, and were punished by the confiscation of their revenue-free grants and villages. These Sayyids are, for the most part, the descendants of Jalál-ud-dín Husain, surnamed Makhdúm Jahániya of Bukhára, Sikandar Lodi's spiritual preceptor. They still hold firmáns granted by Bábar, Humayún, Akbar and Jahángír, confirming the grant to them of a *jágír* by Sikandar Lodi.

Aurangzib deprived them of the *jágír* as a punishment for Muhammad Taiyáb, its holder, having favoured the cause of Dárá Shikoh, the pretender to his throne. Though Najíb-ud-daula granted the zamíndári to these Sayyids they never got possession, and in 1803 the settlement was made with the resident landholders found in possession. There are now 28 distinct estates in the town. The most influential family now in the town is that of Chaudhri Lachhman Singh, an Honorary Magistrate. He comes of an old Gaur Brahman family, and although during the ascendancy of the Sayyids his family was of little note, it has again risen since their downfall. Lachhman Singh behaved loyally during the disturbances of 1857, and was rewarded by the grant of the zamíndári of several villages assessed at Rs. 2,000 per annum.

Site.

Shikárpur is a fine flourishing town, containing many substantial well-built houses and handsome mosques. The southern part of the town consists of a great walled sarái, some two hundred years old, through which the high road passes. Along the roadway here are rows of poor looking shops forming a small bazar, which is closed at each end by gates. Behind the shops, to the south, is the space now used as a sarái, and the rest is now built over with the exception of here and there a narrow road. A street passes out of the sarái on the north and enters the Hindú quarter with its good shops and five temples. Here the way branches into two parts, one going to the north-east and the other to the south-east; the former with some good shops along it, and the latter rather tortuous, and the shops very poor. These roads are metalled and drained throughout, and communicate with each other laterally by narrow, undrained and unmetalled lanes. To the north the town is chiefly inhabited by the cultivators of the neighbouring lands. The town site is in a great part level, and the water drains off to some excavations on the east, whence a cut has been made to the Káli Nadi, a distance of five miles to the southward. A market is held on Wednesdays and Fridays, at which the local manufactures of *gára* cloth and leather shoes find a ready sale. There is a police-station, post-office, and two village schools here. The Chaukidári Act is in force, and in 1872-73 supported a village police of 27 men at a cost of Rs. 1,494 per annum, which is met from a house-tax. The income for 1872-73 was Rs. 3,565 and a balance of Rs. 787, and the expenditure was Rs. 4,086. Twelve scavengers are entertained, but the conservancy arrangements seem to need much more close supervision. The tax falls at Re. 0-5-1 per head of the population and Re. 1-8-4 per house assessed (1,691).

The *khera* or mound near the city used to be called Talpat Nagari or Anyái khera, "the tyrant's abode." The present town was founded about 370 years ago by Sikandar Lodi as a kind of hunting lodge on a large scale: hence the name Shikárpur. About 500 yards to the north of the town there is a very remarkable building commonly known by the name of *bára khamba*, or "the twelve pillars."

These pillars are of red sandstone, and so enormously massive that popular report attributes their preparation and erection to the agency of demons. The building is in reality an unfinished tomb begun by Sayyid Fazl-ulla, son-in-law of the Emperor Farrukhsíyár, about the year 1131 *Hijri* (1718 A.D.), but never completed. There are some fine mango topes here. About two miles to the north-west of Shikárpur lies the village and fortress of Gannauri, where in the early period of British rule Dúndi Khán and his followers held out against an attack of British troops. In Shikárpur itself the ruins of an old fort are still traceable. In Akbar's time it was the head of a mahál or parganah yielding a revenue of 19,84,828 *dáms*, or about Rs. 99,241, and was attached to sirkár Koil and súbah Agra.

SHIKÁRPUR, a parganah in tahsíl Baran of the Bulandshahr district, is a small compact subdivision surrounded on all sides by other parganahs of the same district and bounded on the south-west by the Káli Nadi. In 1872 the total area, by the census returns, amounted to 97 square miles, of which 61 square miles were under cultivation. The area assessed to Government revenue during the same year was 49 square miles, of which 59 square miles were cultivated, 21 square miles were culturable, and 14 square miles were barren.

General appearance.

The parganah is cut off by the Káli Nadi from all irrigation from the Ganges Canal, and there seems no probability of any reaching it from the Fatehgarh branch canal. The best lands in the parganah, in seven villages lying in the *khádir* of the Káli, have been ruined by that river being turned into a canal escape, and the remission of revenue on this account amounted to Rs. 693 in 1866. There are large *úsar* plains in the north and east, interspersed with *dhák* jungle and low marshy lands, especially about Chankla, Khailiya, and Hazratpur. In Chankla the Chhoiya Nála just assumes the appearance of a stream and carries off the drainage of the line of *jhíls* and swamps about it. The soil is generally good *seota*, and the inferior soils are only about seven per cent. of the cultivated area. There are good *kuchcha* roads leading through the parganah to all the principal towns in the neighbourhood, and a great deal of traffic passes, more especially on the road from Anúpshahr to Khúrja. Besides wheat and barley, the staple product is safflower, which is very extensively grown. The only town is Shikárpur. Chaudhri Lachhman Singh, a Gaur Brahman, owns 18 entire villages and shares in 7 others; Gautam Brahmans own 4 villages; Sayyids 8, and Badgújars 11; the remainder are distributed among various castes.

Fiscal history.

The past settlement under Regulation IX. of 1833 was light and easily paid. There were no sales for arrears of revenue, and only two instances of farm. The alienation statements show that 15 entire villages and portions of 19 others changed hands by mutual

arrangement, whilst 9 entire villages and 25 portions of others were transferred by orders of the civil courts. Eleven of those transferred by private sale belonged to Sayyids, who are notoriously extravagant; none of the changes can, in any way, be traced to undue pressure of the land assessments. Of the 120 estates forming the parganah in 1865, 86 were zamíndári, 23 were pattidári and 11 were bháyachára. 414 holdings were cultivated by proprietors, 1,295 by hereditary cultivators, and 2,828 by tenants-at-will. The late Mr. G.H. Freeling made the new assessment in 1860-61 A.D. The following statement shows the statistics connected with the past and present settlements and those collected in 1871; the expiring revenue of the past settlement is given:—

Settlement.	Total area.	Barren and unassessable.	Culturable.	Cultivated.			Revenue with cesses.	Incidence of revenue and cesses on		
				Irrigated.	Dry.	Total.		Total area.	Entire culturable area.	Cultivated area.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.	Rs. a. p.	Rs a. p.
Past, ...	60,569	7,278	24,188	8,236	20,867	29,103	49,691	0 12 4¾	0 14 1	1 9 9½
New, ...	61,710	11,580	14,231	13,170	22,729	35,899	58,908	0 15 3	1 2 10	1 10 3
1871, ...	61,710	11,580	14,231	13,170	22,729	35,899	62,723	1 0 3	1 4 0	1 11 11

The land-revenue for 1872 amounted to Rs. 57,021 (or with cesses Rs. 62,955) falling at a rate of Re. 0-14-8 per British acre on the total area, at Re. 0-15-2 per acre on the area assessed to Government revenue, and at Re. 1-7-4 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 1,59,123.

Population.

According to the census of 1872 parganah Shikárpur contained 82 inhabited villages, of which 30 had less than 200 inhabitants, 34 had between 200 and 500, 10 had between 500 and 1,000, and 7 had between 1,000 and 2,000; the only town containing more than 5,000 inhabitants is Shikárpur itself, with a population of 11,150 souls. According to the settlement records in 1865 there were then 85 villages on the register, distributed amongst 120 estates (*maháls*). The total population in 1872 numbered 42,522 souls (20,366 females), giving 438 to the square mile. Classified according to religion, there were 34,697 Hindús, of whom 16,516 were females, and 7,826 Musalmáns, amongst whom 3,850 were females. Distributing the Hindú population amongst the four great classes, the census shows 6,672 Brahmans, of whom 3,150 were females; 1,225 Rajpúts, including 563 females;

2,315 Baniyas (1,134 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 24,485 souls, of whom 11,669 are females. The principal Brahman subdivisions found in this parganah are the Gaur (5,972) Bohra and Joshi. The chief Rajpút clans are the Badgújar (898), Chauhán (74), Panwár, Jádon (32) and Bais. The Baniyas belong to the Agarwál (701) and Dasa (680) subdivisions. Amongst the other castes the most numerous are the Kahár (1,096), Ját (5,792), Khatík (1,697), Chamár, (7,735), Khákrob (1,172), and Máli (1,065). The following castes with less than one thousand members each also occur:—Lodha, Darzi, Kalál, Barhai, Hajjám, Dhobi, Ahír, Gararíya, Lohár, Koli, Kumhár, Sonár, Gosháin, Jogi, Dhúna, Káyath, Bhát, Bharbhúnja, Chhípi, Aheriya, Taga, Orh, and Meo. The Musalmáns are distributed amongst Shaikhs (915), Sayyids (553), Patháns (113), converted Hindús (287), and the remainder are entered without distinction. The cultivators of the parganah are generally good, and the castes which predominate are Brahmáns, Játs, Badgújars, and Rajpúts. The Musalmán cultivators are chiefly converted Hindús and Sayyids, and in 1865 were only in the proportion of 7·25 per cent. to the Hindú cultivators.

Occupations.

The occupation of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 156 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,582 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 859 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 6,726 in agricultural operations; 2,076 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 1,604 persons returned as labourers and 25 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 1,962 as landholders, 19,139 as cultivators, and 21,422 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, shows 792 males as able to read and write out of a total male population numbering 22,157 souls.

History.

The present parganah was formed by Akbar and attached to dastúr Thána Farída in sirkár Koil and súbah Agra. Previous to the conquest General Perron gave the parganah on a fixed lease to Dúndi Khán, a Badgújar of Kamauna. He fought against the British and was worsted. The parganah was then settled with the actual proprietors, and was included in Koil or Aligarh. In 1824 the parganah contained 93 villages, and was transferred to this district. In 1844 its boundaries were revised and 85 villages were left in it. It remained until 1859 in tahsíl Dibái, when it was transferred to the Baran tahsíl, to which it still belongs. Before the

Muhammadan rule this part of Bulandshahr was known as *Janmejaya jai ki chaurási.*

Population.

SIKANDARABAD, the principal town of the parganah and tahsíl of the same name in the Bulandshahr district, lies ten miles east of Bulandshahr on the Dehli branch of the Grand Trunk Road, in latitude 28°-27′-10″ and longitude 78-44′-40″. In 1847 Sikandarabad showed a population of 14,843 souls, in 1853 the numbers amounted to 16,555, and in 1865 to 15,968. The site occupies 199 acres, giving 99 souls to the square acre. In 1872 there were 18,349 inhabitants, of whom 10,933 were Hindús (5,193 females) and 7,395 were Musalmans (3,631 females). Distributing the population according to the broad division of agriculturists and non-agriculturists, there were 206 landowners, 1,458 cultivators, and 16,685 persons following occupations unconnected with agriculture. Taking the male adult population (not less than fifteen years of age), the following occupations are followed by more than fifty men:—Barbers, 161; beggars, 160; bricklayers, 59; butchers, 120; cartmen, 205; cultivators, 555; goldsmiths, 56; labourers, 869; landowners, 54; pandits, 73; petty dealers, 150; perfumers, 78; potters, 94; purohits, 103; servants, 1,045; shopkeepers, 828; singers, 68; sweepers, 130; water-carriers, 72; and weavers, 652. There are 3,513 houses in the town, of which 1,345 are built by skilled labour, and of these Musalmáns own 416. Of the 2,168 houses built of mud Musalmáns occupy 957. The enclosures number 1,763. The most prominent and well-to-do inhabitants are Bhatnagar Káyaths. Munshi Lachhman Sarúp, a large landholder and Honorary Magistrate, is one of the leading men of the town; and there is also a family of literary pandits of some note who issue a Sanskrit calendar every year.

Muhallas or wards.

The wards are called: (1) Cháusiwára, founded by Khushi Rám, a Ját of the Cháusi *got* in the time of Sikandar Lodi; (2) Gaddiwára, or milk-sellers' ward; (3) Bhátiawara, founded by a Bhátiya Khattri named Malji in the days of Sikandar Lodi; (4) Mirdahahwára, or surveyors' ward; (5) Saraugiwára, founded by Lál Mari; (6) Khattriwára; (7) Bédwara, or physician's ward, of which Kulas Rái was the founder; (8 and 9) Kesi and Hariwára, after two wealthy Baniyas who flourished in Sikandar Lodi's time; (10) Sogi-pára, called after a Baniya, named Mohan, who suffered from some loathsome disease; (11) Gujrátiwára, founded by Amba Chand, a Gujráti Brahman, and the most celebrated member of the family; (12) Káyathwára, founded by Díp Chand, who came with Sikandar Lodi: the office of kanúngo remains in his family; (13) Shaikhwára, founded by Shaikh Kháu Muhammad in the time of Sikandar Lodi; (14) Haildár, founded by Muhammad Panáh, who had a school here in the early days of the town; (15) Sarái Jhájhan, after a Baniya who supplied the royal troops; and (16) Nayaganj, founded by Nawáb Sábit Khán in the days of Muhammad Sháh.

The Grand Trunk Road to Dehli skirts the town on the west, and east of it is one muhalla mostly inhabited by the poorer classes, but still containing a few good shops. The two principal bazarways cross each other at right angles at a central space called the *chauk;* one runs from north to south, and the other from east to west. That on the north, called the Bará bazar, passes on to Mádho Dás's bazar, which is a long fairly straight roadway extending from the Galáothi road on the north-west to the Bulandshahr road on the south-east. All these bazarways are metalled and are drained by saucer drains. The houses on each side are brick-built and in good repair, and many are double-storied, especially in the Bará bazar, the old quarter of the town. The central bazar is connected with the Grand Trunk Road by two roadways, both of which are narrow, tortuous, and unmetalled. To the north-east of the Bará bazar is a wide open space called the *ganj*, used as a resting-place for carts. It is uneven, ill-drained, and uncared for, but still the great assembling place for all cotton, sugar, and grain, which change hands here. The site, as a whole, is level, and being situated on the watershed between the Jumna on the west and the Káli Nadi on the east, the drainage is excellent, notwithstanding the number of excavations and the amount of broken land all round. The water in the wells stands at about 25 feet from the surface, and has risen about six feet since canal-irrigation was introduced into the neighbourhood. In the town the water generally is a little brackish, but in the outskirts it is sweet. Although fever prevails in the autumn time, it seldom takes the malignant form so common further north, and enlargement of the spleen is seldom seen.

The site.

The tahsíl and thána are situated outside the town on the Grand Trunk Road, in the same building, erected at a cost of Rs. 14,017 in 1865. It is a strongly built square enclosure with small towers at each corner, and almost the entire cost of construction has been defrayed from the fines levied on those who plundered the town in 1857. The dispensary was built in 1867, and contains two large rooms and a verandah intended for the accommodation of out-patients only. The residents contribute a small sum monthly towards the support of this institution. The Anglo-vernacular school is attended by about 70 boys, and the tahsíli school has an average of 140 pupils, of whom about 50 are Musalmáns. The latter is one of the most flourishing institutions of the kind in these provinces. It is at present held in a hired building, but a new one will be built for it by the municipality. A branch of the Church of England Mission exists here, but both mission house and mission church are wretched places when compared with the mosques and temples of the neighbourhood. There are four native saráis at different parts of the town, besides a traveller's bungalow, a *paráo*, and an encamping-ground in the outskirts. The tombs of Chishti Burhán-ud-dín and Bándagi

Public institutions.

Sháh Husain are situate in the suburbs and are objects of reverence to the Musalmán population. The former is said to be nearly 400 years old and the latter to be 250 years old. The most celebrated Hindú temple is that in honour of Jhárkandi Mahádeo. Munshi Hargopál, a resident of the town, is well known as a Persian and Urdu poet under the *takhallus* of Taftah Sikandarabadi.

The municipality.

Act XX. of 1856 (the Chaukidári Act) was in force in the town until the 16th May, 1872, when Sikandarabad was formed into a municipality. The boundaries of the new jurisdiction are carefully marked out by pillars, and the usual preventive rules have been introduced. Drainage, latrines, metalling roads, filling up excavations, and such like works of a useful nature are vigorously prosecuted. The municipality also supports a town police which numbered 28 men of all grades in 1872-73, besides a staff of 22 scavengers. The affairs of the municipality are managed by a committee of 18 members, of whom 6 are members *ex-officio* and the remainder were nominated for the first year. The income is derived from an octroi-tax falling at eight annas per head of the population. The following statements show the income and expenditure and the imports and exports for two years:—

Receipts.	1872-73.	1873-74.	Expenditure.	1872-73.	1873-74.
	Rs.	Rs.		Rs.	Rs.
Opening balance, ...	876	5,361	Collection, ...	1,249	1,551
Class I.—Food and drink, ...	5,794	7,369	Head-office, ...	185	132
II.—Animals for slaughter,	102	112	*a.* Original works, ...	58	2,458
III.—Fuel, ...	567	949	*b.* Supervision, ...	...	...
IV.—Building materials,...	684	832	*c.* Repairs, &c., ...	501	269
V.—Drugs, spices, ...	626	750	Police, ...	2,329	2,445
VI.—Tobacco, ...	90	172	Education, ...	155	219
VII.—Textile fabrics, ...	1,099	1,383	Conservancy, ...	697	902
VIII.—Metals, ...	217	240	Charitable grants, ...	140	312
Total of octroi, ...	9,179	11,807	Miscellaneous, ...	81	412
Rents, ...	117	140			
Fines, ...	118	190			
Pounds, ...	227	283			
Miscellaneous, ...	244	157			
Total, ...	10,756	17,939	Total, ...	5,395	8,692

Articles.	Quantity imported in 1872-73.	Quantity in 1873-74.		Articles.	Value imported in 1872-73.	Value in 1873-74.	Consumption per head in	
		Imported.	Retained in town.				1872-73.	1873-74.
	Mds.	Mds.	Mds.		Rs.	Rs.	Rs. a. p.	Rs. a. p.
Wheat, ...	41,545	60,372	56,768	Fruits, ...	6,543	8,256	...	...
Barley, ...	32,941	51,764	49,567	Fodder, ...	8,754	12,105	...	...
Joár, ...	1,233	4,646	4,639	Ghi, ...	35,125	37,173	2 3 0	1 15 0
Maize, ...	6,749	7,942	7,348	Gúr, ...	38,549	35,442	2 1 7	1 14 8
Moth, ...	1,614	2,100	1,843	Shíra, ...	4,131	5,230	0 3 1	...
Gram, ..	5,909	14 965	13,922	Khand, ...	29,054	42,954	1 9 4	2 4 5
Urd, ...	2,596	4,844	4,841	Sugar, ...	38,729	44,461	2 1 9	2 4 5
Masúr, ...	187	191	191	Pán, ...	1,883	2,111	...	...
Múng, ...	6,667	5,879	5,873	Water-nuts,&c,	2,899	3,695	...	...
Arhar, ...	2,456	1,879	1,868	Fuel, &c., ...	35,896	59,338	1 15 2	2 13 6
Rice, ...	11,169	16,043	16 029	Building materials.	21,873	26,634	1 3 1	...
Vegetables,	7,917	7,576	...	Drugs & spices,	20,037	24,016	1 1 5	1 4 9
Bájra, ...	3,522	6,632	6,405	Tobacco, ...	2,877	5,497	0 6 4	0 4 8
Reh and saji,	326	1,074	...	Cloth, ...	1,41,030	183,226	7 11 5	9 15 6
				Metals, ...	26,718 heads	26,822 heads	1 7 3	1 7 4
				Animals, ...	2,577	2,559	...	...

The consumption of food-grains in 1872-73 amounted to 7 maunds 9 sers 9 chhatáks per head of the population; in 1873-74 the figures were 9 maunds 7 sers 14 chhattáks.

There is a station of the East Indian Railway at Kherli Háfizpur, about four miles south of the town, with which the town is connected by a metalled road. The only manufacture for which Sikandarabad is noted is that of fine cloth or muslin used for *pagarís* or turbans, and for the *sárís* of females, called "*purbiya adhotar*." The *pagarís* are often interwoven with silver thread, and are sent to Meerut, Aligarh, &c., where they sell for from ten to twenty rupees each. Very good *rúmáls* or pocket-handkerchiefs are also made here. There are no

large merchants resident in the town, and there is no regular market day. Sikandarabad lies on the military high road between Aligarh and Dehli, and is distant ten miles from Chola, towards Aligarh, and twelve miles from Dádri, towards Dehli. The road throughout is metalled and bridged. A metalled road also connects it with the Grand Trunk Road to Meerut (see DÁDRI and CHOLA). Small cross-country fair-weather roads fully connect it with the villages in the neighbourhood.

History.

The town was built by Sikandar Lodi in 1498 A.D., and made the headquarters of a *chakla* comprising 28 neighbouring parganahs. In the time of Akbar Sikandarabad was made the head of a mahál or parganah, paying a yearly revenue of 12,59,199 *dáms*, or Rs. 62,959, and belonging to the sirkár and súbah of Dehli, which continued till the Marhatta ascendancy in 1747 A.D. On the British occupation it was included in the Aligarh district, and in 1824 in the Bulandshahr district. There are several historical associations connected with this town, for it was the centre of a portion of the fief of Najíb-ud-daula, and it was near it that Sádat Khán, Viceroy of Oudh, engaged and defeated the Marhatta force in 1736. It was here again that the Ját army of Bhartpur encamped in 1764, and fled across the Jumna after Suraj Mal was killed and Jawáhir Singh was defeated by the king's troops. While the Marhattas held the Duáb, a brigade under Perron was stationed at Sikandarabad to overawe the turbulent Gújars and other troublesome neighbours, and so facilitate the collection of the revenue. Immediately after the battle of Aligarh, the late Colonel James Skinner was sent here with 1,200 horse to protect the road between Dehli and Aligarh. Shortly afterwards he was ordered to retire by the Marhatta jágírdár of Málágarh, but refused and attacked Málágarh, where, after a severe fight, he was victorious. The greater part of the land in and about Sikandarabad was orginally held revenue-free from the founder. These grants seem to have been respected and confirmed by successive rulers, and at the present day some 1,526 bíghas are held revenue-free by the descendants of the original grantees. Sikandarabad suffered greatly in the disturbances of 1857. The Gújars, Rajpúts, and Muhammadans of the neighbouring villages plundered the town completely. For this most of the surrounding villages were heavily fined in a sum of four lakhs of rupees, subsequently reduced to two lakhs, but none of this money found its way into the pockets of those who suffered the loss of all their property and worldly wealth in the universal pillage. The town quickly recovered itself when order was once restored, and is now one of the most flourishing in the district. Colonel Greathed's column relieved the town on the 27th September, 1857.

SIKANDARABAD, a parganah in the tahsíl of the same name in the Bulandshahr district, is bounded on the north-east and east by parganah Agauta

LITHOGRAPHED AT THE SURVEYOR GENERAL'S OFFICE, CALCUTTA, [illegible]
From an original supplied by R. T. Atkinson Esq. in charge of the [illegible] Chambers.

and Baran, on the south by Khúrja, on the west and north-west by Dankaur and Dádri, and on the north by parganah Dásna of the Meerut district. In 1872, the total area, by the census, amounted to 158 square miles, of which 114 square miles were under cultivation. The area assessed to Government revenue during the same year was 143 square miles, of which 102 square miles were cultivated, 20 square miles were culturable, and 21 square miles were barren. To the north and north-east of the parganah the soil is of excellent quality and very productive. The lighter sandy soils, such as *bhúr* and *pilota*, comprise only 17 per cent. of the cultivated area, and are principally found all along the western portion of the area from Tilbegampur to Kakor, between the two main branches of the Bulandshahr branch canal, which with the main Ganges canal and its network of *rajbahas* makes this parganah, next to Agauta, the most highly irrigated parganah in the district. The Grand Trunk Road traverses the parganah from north-west to south-east, and the metalled Anúpshahr road meets it at Sikandarabad. The East Indian Railway has a station at Gangraul, called Chola, though Chola is three miles off, and another at Kherli Háfizpur, called Sikandarabad, which is connected by a metalled road with the town of that name. Roads also connect it with Galáothi, and through Kakor with Jewar. The chief products are wheat and barley, though sugar-cane, cotton, indigo, and safflower are also grown. The chief towns are Sikandarabad, Ada, Tilbegampur, and Kakor. The really good culturable waste is not very extensive, and is much interspersed with barren land, known as *shor*, *kallar*, and *usar*, particularly towards the heads of the Káron Nadi. Towards Sarái Ghási there are several large *usar* plains, and about Gesupur *dhák* jungle is common, and low-lands covered with long grass and interspersed with *usar*, good in parts, and in others absolutely useless, appear at intervals.

General appearance.

There are seven villages held either in *jágír* or revenue-free: three are held by the Skinner estate, two are revenue-free for ever, and two are held free of revenue for the life of the present incumbents. The most striking features of the last settlement is the heavy incidence of the revenue on the industrious Ját and Ahír village communities, and it is remarkable how well they have stood it. There was little or no coercion used in collecting the revenue, and the alienation statement shows only one village and 34 portions of villages transferred by orders of the civil courts. At the same time eleven entire villages and 30 portions of villages changed hands by mutual agreement. Out of the 178 estates in the parganah in 1865, 95 were zamindári, 25 were pattidári, and 58 were bháyachára. These latter are principally Ját, Ahír, Rajpút, and Gújar communities: 2,243 holdings were cultivated by proprietors, 1,369 by hereditary cultivators, and 5,674 by tenants-at-will. The new assessment was made by Mr. R. Currie in 1863-64. The

Fiscal history.

following statement shows the statistics of the past and present settlements, and those collected in 1871; the expiring revenue of the past settlement is given:—

Settlement.	Total area in acres.	Barren and unassessable.	Culturable.	Cultivated.			Revenue, with cesses.	Incidence of revenue and cesses on		
				Irrigated.	Dry.	Total.		Total area.	Entire culturable area.	Cultivated area.
							Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Past,	98,679	16,497	28,346	17,583	36,253	53,836	83,772	0 13 7	1 0 3	1 8 11
New,	100,955	23,657	16,247	28,242	32,809	61,051	97,994	0 15 6	1 4 3	1 9 8
1871,	100,959	23,624	16,256	28,257	32,822	61,079	1,06,216	1 0 10	1 5 11	1 11 10

The land-revenue for 1872, according to the census returns, amounted to Rs. 96,560 (or with cesses Rs. 1,07,353), falling at a rate of Re. 0-15-3 per British acre on the total area, at Re. 1-0-11 per acre on the area assessed to Government revenue, and at Re. 1-5-2 per acre on the cultivated area. The sum paid by cultivators to the land-owners as rent and cesses during the same year has been estimated at Rs. 2,72,094.

Population.

According to the census of 1872, parganah Sikandarabad contained 144 inhabited villages, of which 44 had less than 200 inhabitants, 45 had between 200 and 500, 30 had between 500 and 1,000, 22 had between 1,000 and 2,000, and two had between 2,000 and 3,000. The only town containing more than 5,000 inhabitants is Sikandarabad itself, with 18,349. The records of 1865 show that there were then 155 villages on the register, distributed amongst 178 *mahâls* or estates. The total population in 1872 numbered 91,988 souls (43,592 females), giving 582 to the square mile. Classified according to religion, there were 74,645 Hindús, of whom 35,066 were females; 17,314 Musalmáns, amongst whom 8,511 were females; and there were 29 Christians. Distributing the Hindu population amongst the four great classes, the census shows 9,185 Brahmans, of whom 4,374 were females; 8,261 Rajpúts, including 3,123 females; 4,307 Baniyas (2,044 females);

whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 52,892 souls, of whom 24,915 are females. The principal Brahman subdivisions found in this parganah are the Gaur (8,314), Kanaujiya, Saraswat, Sanádh, Bohra, and Charásya. The chief Rajpút clans are the Chauhán (403), Badgújar (76), Jádon (313), Bais (77), Bhál, Jaiswár, Gaur, Bargala, Jarauliya, Bhatti, Rawat, and Mori. The Baniyas belong to the Agarwál (3,317), Dasa (382), Saraugi, Dhusar, and Rastaug subdivisions. The most numerous amongst the other castes are the Kahár (1,380), Ját (5,063), Hajjám (1,731), Khatík (1,228), Chamár (12,596), Khákrob (3,421), Ahír (5,577), Koli (1,915), Kumhár (1,573), Máli (1,731), Gújar (6,499), and Orh (1,186). Besides the castes above mentioned the following are found in this parganah with less than one thousand members each:—Lodha, Darzi, Kalál, Barhai, Dhobi, Garariya, Lohár, Sonár, Jogi, Gosháin, Dhúna, Bhat, Káyath, Bharbhúnja, Bairági, Chhípi, Aheriya, Taga, Joshi, Dhanak, Ráj, Tamoli, Khattri, Harkiya, Nat, and Núniya. The Musalmáns are distributed amongst Shaikhs (2,117), Sayyids (337), Patháns (634), converted Hindús (330), and the remainder are entered without distinction. The Ahirs and Játs are the best cultivators, though some of the Rajpúts, also, are good.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 434 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 3,763 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 2,281 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 14,310 in agricultural operations; 4,032 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 3,854 persons returned as labourers and 608 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 939 as landholders, 42,364 as cultivators, and 51,685 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 2,349 males as able to read and write out of a total male population numbering 48,396 souls.

History.

The Emperor Sikandar Lodi founded Sikandarabad and made it the headquarters of a *chakla* comprising 22 tappas, *viz*, Sikandarabad, Ada, Tilbegampur, Jewar, Sayána, Dankaur, Baran, Sentha, Agauta, (9) Púth, Pahásu, Khúrja, Shikárpur, Ahár, Tháná Farída, Hápur, Palwal, Jalálpur, Sarwat, Dásna, Saráwa, Shakrpur, Garhmaktesar, and Loni. In Akbar's revision the last thirteen were detached from the *chakla* and distributed among the neighbouring dastúrs. Sikandarabad

was attached to dastúr Baran in sirkár and súbah Dehli. So matter continued until the Marhatta ascendancy in 1747 A.D., when whoever gave the highest premium obtained the lease of a parganah, and the *chakla* was broken up. The last chakladárs were Nawáb Sábit Khán and Raja Dilarám. On the British occupation Sikandarabad was attached to the Aligarh district, and in 1818 was transferred to Meerut. In 1824 it formed a portion of the new district of Bulandshahr. It then contained 176 villages, reduced in 1844 to 155, containing 191 estates. Rajpúts possess 22 villages, Ahírs 13, Játs 8, Gújars 9, Káyaths 17, Bilúches, Sayyids, and Shaikhs 7, and the Skinners 21½ villages; the rest are distributed among various castes.

SIKANDARABAD, a tahsíl in the Bulandshahr district, comprises the parganahs of Sikandarabad, Dádri, and Dankaur. The total area according to the census of 1872 contains 524 square miles, of which 370 square miles are cultivated. The area assessed to Government revenue is given at 481 square miles, of which 338 square miles are cultivated, 86 square miles are culturable, and 57 square miles are barren. The land-revenue during the same year stood at Rs. 2,89,960 (or with cesses Rs. 3,21,738), falling at Re. 0-13-10 per acre on the total area, Re. 0-15-1 per acre on the area assessed to Government revenue, and Re. 1-3-7 on the cultivated area. The population numbered 237,374 souls (111,011 females), giving 212 to the square mile, distributed amongst 415 villages. The same statistics show 825 persons blind, 83 lepers, 20 insane persons, 17 idiots, and 50 deaf and dumb in the tahsíl. The Sikandarabad tahsíl occupies the north-western portion of the district. Gújars form the characteristic element of the population and have always given the most trouble to the tahsíldár, for this reason it is the hardest worked tahsíl in the district. All other particulars connected with the tahsíl will be found under the notices of the parganahs comprising or under the district itself.

SURAJPUR, a village of parganah Dádrí and tahsíli Sikandarabad of the Bulandshahr district, lies 24 miles north-west of the civil station, 5 miles south of Dádrí, and four miles from the railway station. The population in 1865 was 2,109, and in 1872 was 2,341. There is a market on Tuesdays, a police-station and a village school. It was once a flourishing town and resting-place on the old imperial road, and was founded by one Suraj Mal, Káyath. Upon the introduction of British rule it became the seat of a thána, tahsíli, and munsifi, which were transferred in 1844 to Sikandarabad. The porprietary rights in the town land were conferred on the Bhatiyáras and Gújars, who adhered to it in the worst days before the British rule commenced.

THORAH, a town of parganah Jewar and tahsíli Khúrja of the Bulandshahr district, lies 21 miles south-west of the civil station, 5 miles from Jewar, and 15 from Khúrjá on the road connecting both. The population in 1872 was 2,422. There is a market on Mondays. Thorah is the seat of one of the

largest commercial firms in the district, the present head of wnich is Todar Mal.

TILBEGAMPUR, a town of parganah Sikandarabad and tahsíli Sikandarabad of the Bulandshahr district, lies 14 miles north-east of the civil station. The population in 1872 was 1,253. It was formerly the head of a mahál of sirkár and súbah Dehli, paying a yearly revenue of 3,70,371 *dáms*, or about Rs. 18,518, and was absorbed into Sikandarabad in 1844. This town is said to have been in the possession of the Bhatti Rajpúts ever since the time of Prithiráj, when a large colony of their clan came to this district from Bhattiána, across the Jumna, and settled in it after having expelled the Meos. The last Bhatti proprietors were of the Muhammadan faith, which the family had adopted during Alamgír's reign, and turned rebels in the disturbance of 1857. Their villages were consequently confiscated and given in reward to Mr. Thomas Skinner for good services in the mutiny. A Persian and Sanskrit inscription on an old well near the town bears date 945 *Hijri* and 1595 *Sanvat* (1538A.D.), in the time of Humáyún, when Fakír Ali Beg was governor.

بسم‌الله الرحمن الرحيم

اين چاه و چهنال در عهد ظل‌الله في‌العالمين محمد همايون بادشاه غازي خلد خلافته
بدولت و عون همت شجاع‌الدين امير فقيرعلي‌بيگ بهادر بنياد ساخت مهتادتو ابن
باسدها كهتري بتاريخ غره يوم‌الجمعه في شهر جمادي‌الثاني سنه خمس اربعين تسع ماية *

श्रीगणेशाय नमः

अविरलमदजलनिवहं भ्रमरकुलानेकसेवितकपोलं ।
अभिमतफलदातारं कामेशं गणपतिं वन्दे ॥ १ ॥

अथ शुभसम्बत्सरेऽस्मिन् श्रीनृप विक्रमादित्यराज्ये संवत् १५९५ शाके १४६० वर्षे मार्गशिरमासे शुक्लपक्षे दशमीतिथौ शनिवासरे उत्तरा नक्षत्रे वरियाननामयोगे शुभमुहूर्त्ते वर्त्तमानराज्य योगिनीपुरे पातिसाह-हुमाऊं आज्ञा प्रवर्त्तमाने तस्य आज्ञाकारी अमीर फ़क़ीरअलीबेग वर्त्तमाने ॥ क्षत्रियान्वये । गडियलपुरे गोत्रे श्रीश्याम तत्पुत्रादिना तस्य पुत्र राजाधिराज परमवैष्णव । षट् दर्शन आश्रीत तत्पुत्र महातदित्य वापीकारिका । बाहीकराई । आचन्द्रार्कात् पुत्र पौत्रैः सह शुभं भूयात् ॥

Persian Translation.

This well and this aqueduct was made during the reign of the Shadow of God in the world Muhammad Humáyún Pádisháhi Ghází—may his sovereignty be perpetuated!—and with the auspicious help and approval of Shujá-uddín Amír Faqír Alí Beg Bahádur, by Mahatáditú, son of Básdahá, the Khatrí, on Friday, 1st Jumáda II, 945 [26th October, 1538].

Hindí-Sanskrit Translation.

Obeisance to Sri Ganesa ! I bow to him whose cheeks are frequented by numerous black bees, attracted by the everflowing *mada* juice, who is the dispenser of desirable fruits, who is the lord of desires and the chief of the ganas.

In this auspicious year, in the year of the era of the reign of Prince Vikramáditya, 1595, Sak era 1460, in the month of Agrahayána, in the bright phase of the moon, on her tenth day, Saturday, in the constellation Uttara, in the Yoga variyán, in an auspicious moment, in the undermentioned dominion, Jagini Pura, when the rule of Emperor Humáyún was enforced, during the lifetime of his order-bearer Amír Fakír Alí Beg, in the village Gariyal, in the family of Syama Mahatáditta, well versed in six darsanas, a great Vaishnava prince made this well, and opened it to the public, with the view of securing the prosperity of his sons and grandsons so long as the sun and the moon endure.

ZAINPUR, a small village in parganah Agauta, is distant five miles from Bulandshahr. The population in 1872 numbered only 203. This village is held on a perpetual revenue-free tenure by Bansi Rái and others of the Bhát caste who are proprietors as well as grantees. The khádir lands of the village have been much injured by the inundation of the Káli Nadi.

MEERUT (MIRATH) DISTRICT.

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Meerut[1] (Mírath), a district which gives its name to the Meerut Division, is situated in the tract of country known as the upper Duáb. It is bounded on the north by the district of Muzaffarnagar; on the east by the Ganges, separating it from the districts of Bijnaur and Moradabad; on the south by the Bulandshahr district; and on the west by the Jumna, which separates it from the Panjáb Province.

[1] The conventional mode of spelling is retained. I am indebted to Mr. S. H. James, C.S., for valuable notes from which much of the agricultural portion of this district notice has been compiled.

Area and boundaries.

The Meerut district lies between north latitude 28°-28′-15″ to 29°-18′, and east longitude 77°-10′-30″ to 78°-14′, and contained, according to the survey papers at time of settlement (1866—1868), an area of 1,505,824 acres, or 2,352·85 square miles, increased by alluvion to 2,353·54 square miles in 1872. The population in 1865 was 1,199,593, or 508 persons to the square mile: in 1872 there were 1,273,914 inhabitants, or 541 to the square mile, and of these 991,226 were Hindús, 281,857 were Musalmáns, and the remainder were Christian or foreign Asiatics. Besides these there were 2,149 Europeans and 142 Eurasians in the district. The whole boundary line of the district is about 230 miles; its greatest length is 58 miles, the least length is 49 miles: the greatest breadth is 48 miles, and the least breadth is 36 miles. On the west the Jumna river forms a natural boundary, and the Ganges on the east. On the south there is no natural boundary, nor on the north, except for some nine miles, where the Hindan, joined in its course by the West Káli Nadi; flows in a south-westerly direction.

Administrative divisions.

The following table gives the revenue, civil, and police jurisdictions, with revenue, area, and population of each subdivision:—

Present Tahsil.	Includes Parganah.	Included in the Aín-i-Akbari in	Number of inhabited villages.	Land-revenue with cesses in 1872 (census).	Census area in square miles and acres in 1872.		Population in 1872.	In the police jurisdiction of station.
				Rs.	Sq. m.	Ac.		
I.—Meerut, ...	1. Meerut, ...	Mírath, ...	284	4,54,951	866	290	274,899	Meerut (3). Jáni, Daurála, Mau.
II.—Hapur, ...	2. Hápur, ...	Hápur, ...	133	1,48,775	162	441	96,776	Hápur.
	3. Sarawa, ...	Saráwa, ...	50	67,201	76	220	37,255	Kharkoda.
	4. Garhmuktesar,	Garhmuktesar, ...	80	65,238	105	122	46,913	Garhmuktesar, Baksár.
	5. Púth, ...	Púth, ...	45	44,133	64	341	24,196	Púth.
III.—Ghaziabad,	6. Ghaziabad, ...	Dásna, ...	104	1,33,334	137	167	81,333	Dásna, Pilkhua, Dhaulána.
	7. Jalálabad, ...	Jalálabad, ...	134	1,92,631	201	123	105,559	Begumabad, Muradnagar.
	8. Loni, ...	Loni, ...	118	1,01,931	155	602	66,145	Sháhdara, Loni, Ghaziabad.
IV.—Bágpat, ...	9. Bágpat, ...	Bágpat, ...	120	2,31,199	194	55	108,168	Bágpat, Khekara, Baleni.
	10. Baraut, ...	Jalálpur, Baraut,	52	1,26,948	76	239	56,240	Baraut.
	11. Kutana, ...	Kutána, ..	45	1,09,376	72	429	45,561	Kutána.
	12. Chhapraull, ...	Chhapraull, ... Tanda Phugána,	20	98,789	58	335	37,975	Chhaprauli, Sardhana.
V.—Sardhana, ...	13. Sardhana, ...	Sardhana, ...	64	1,88,560	137	251	82,401	Daha, Baleni.
	14. Barnáwa, ...	Barnáwa, ...	64	1,41,951	113	434	64,997	Kamrud dinnagar.
VI.—Mawana, ...	15. Kithor, ...	Saráwa, ...	122	1,30,428	189	432	70,152	Parichhatgarh, Kithor.
	16. Hastinápur, ...	Hastinápur, ...	138	1,62,475	241	346	75,344	Mawána, Sarzapur, Bahsúma.
		District Total,...	1,573	24,00,920	2,353	347	1,273,914	

[1]The census of 1865 returns the total area at 2,361·98 square miles, that of 1853 gives 200·09 square miles, and that of 1848 gives 2,332 square miles.

Changes in the administrative subdivisions.

There have been such numerous changes in the Meerut district since its formation that there is much difficulty in tracing out the boundaries of the district in different years, and though tradition ascribes an attempt at settled government in the upper Duáb to the Pándavas many centuries before the Christian era, but very little is known concerning the early local history of the district until the reign of Akbar. According to the revenue records of that monarch the parganahs at present found in the Meerut district belonged to the súbah of Dehli and, excepting the present Sardhana parganah, to the sirkár of Dehli. The parganah of Sardhana was in the sirkár of Saháranpur and constituted with what now forms a considerable part of the Muzaffarnagar district a *dastúr* or subdivision of itself. Meerut city was the centre of another *dastúr* containing parganahs Kithor, Hastinápur, Saráwa, Hápur, Garhmuktesar, Meerut, Jalálabad, and Barnáwa. The present parganahs of Loni, Dásna, Bágpat, Baraut, Kutána, and Chhaprauli formed portions of *dastúr* Dehli. Púth formed a part of the Baran *dastúr* in the Bulandshahr district. Under the Marhattas Meerut formed a portion of the Saháranpur *báoni* or division including 52 parganahs, and was conquered by the British in 1803. A month after the battle of Laswári, on the 4th December, 1803, Sindhia signed the treaty of Surji Anjengaon, by which he ceded all his possessions between the Jumna and the Ganges to the British. The conquered territory was distributed into three parts and attached to the districts of Etáwa, Moradabad, and Aligarh. Mr. Leycester, Collector of Moradabad, received charge of the upper Duáb, comprising Saháranpur, Muzaffarnagar, and the parganahs in the neighbourhood of Hápur and Meerut, altogether containing 53 mahál, on the 2nd October, 1803, and on the 28th of the same month the three new Collectors met at Koil and fixed the boundaries of their several charges. This arrangement lasted until the following year (September, 1804), when the Duáb territory was detached from Moradabad and formed into a separate zila, known as Saháranpur. In November, 1804, the boundaries were fixed :—"On the east the Ganges, on the west the Jumna, on the north the hills of Srinagar, and on the south the Aligarh district." Between 1804 and 1806 parganahs Bágpat, Loni, Dásna, Saráwa, Jalálabad, Chhaprauli, and Dádri (now in Bulandshahr) were placed under the charge of the Resident at Dehli, but were subsequently attached to the southern division of the Saháranpur Collectorate, with a Collector resident at Meerut, while the revenue affairs of the northern division were administered by a Collector resident at Saháranpur.

Formation of the Meerut district.

This arrangement lasted until 1818 A.D. In that year the parganahs forming the southern division of the Saháranpur district, with the Aligarh parganahs of Sikandarabad, Tilbegampur Ara (Ada), Dankaur, Kásna, Baran, Málágarh, Agauta, and Ahár-Malakpur, yielding a revenue of Rs. 2,51,682, were joined together to constitute the new

district of Meerut. The new distribution lasted until 1824, when the Alígarh parganahs, with Thána Farída and Dádri, were transferred to the new district of Bulandshahr; and Khátauli, Soron, Lalukheri, Jánsath, Shámli, Baghra, and Jauli were transferred to the new district of Muzaffarnagar.

In 1823 the Meerut tahsíls were Meerut, Parichhatgarh, Khátauli, Kándhla, Dásna, Hápur, and Sikandarabad. In 1834 the *jágír* of Bálá Bái Sáhiba of Gwaliar fell in, and in 1835 the tahsíls were seven in number:—Meerut, Hastinápur, Kándhla, Bágpat, Dásna, Hápur, and Púth Sayána. In 1836 the estates of Begam Sumru also lapsed, and parganahs Sardhana, Barnáwa, and Kutána were included in this district. These parganahs formed distinct tahsíls until 1840, when Barnáwa was attached to Baraut, and Hastinápur and Tárápur were added to Sardhana. Gangiru, Phugána, Títarwára, Bhúma, and Sambalhera were transferred to Muzaffarnagar soon after the death of Begam Sumru.

Parganahs in 1837-40.

At the settlement in 1837-40 mention is made of parganahs Chhaprauli, Rucha, Púth, Sayána, Hastinápur-Niloha, Bhúma, Sambalhera, Tárápur, tappa Gaura, Bágpat, Loni, Barnáwa, Tánda, Dásna, Jalálabad, Meerut, Sardhana, Burhána, Baraut, Kutána, Shikárpur, and Kándhla. Of these parganahs, Shikárpur, Sambalhera, Bhúma, Kándhla, Kairána, and Burhána were transferred to Muzaffarnagar in 1842. Rucha formed a portion of parganah Chhaprauli and is now included in it. Parganah Sayána was transferred to Bulandshahr in 1844. Hastinápur-Niloha, also known as Niloha-Tárápur from its principal towns, is now known as Hastinápur only. Tappa Gaura or Gohra formed a part of Hápur, separated from it by Nain Singh, Gújar, at the close of the last century, and is now included in Hápur. The Tánda portion of Tánda Phugána or Tánda Bhagwán contained twelve villages, absorbed in Chhaprauli in 1834, while Phugána was transferred to Muzaffarnagar, and is now included in parganah Kándhla. Kithor was originally a tappa of Saráwa, separated from it by Jít Singh, Gújar, of Parichhatgarh, in the time of Najíb Khán. Tappa Ajrára, separated from Hápur by Fateh Ali Khán, and also known as Saráwa-Ajrára, was incorporated with Saráwa in 1842.

The tahsíl arrangement adopted by Mr. Plowden in 1842, after the transfers to Muzaffarnagar, was as follows:—

Tahsíl.	Parganah.	No. of villages.	Tahsíl.	Parganah.	No. of villages.
Sardhana, ...	Sardhana, ...	80	Baraut, ...	Kutána, ...	37
„ ...	Hastinápur-Niloha,	127	„ ...	Chhaprauli, ...	36
„ ...	Tárápur ...	48	Bágpat, ...	Bágpat, ...	157
Baraut, ...	Baraut, ...	51	„ ...	Barnáwa, ...	79
Dásna, ...	Jalálabad, ...	112	Dásna, ...	Dásna, ...	150
„ ...	Loni, ...	97	Hápur, ...	Púth, ...	46
Hapur, ...	Hápur, ...	75	„ ...	Garhmuktesar,	108
„ ...	Ajrára, ...	12	„ ...	Kithor, ...	60
„ ...	Saráwa, ..	50	„ ...	Gohra, ...	20
			Meerut, ...	Meerut, ...	357

In 1853-54 the parganahs were again re-arranged, and the changes that then took place are shown in the following table because of their topographical interest, and as showing the difficulty of attempting any comparison with the statistics previous to the 1st May, 1853, when these changes came into force[1] :—

Changes in the distribution of parganahs effected in 1852.

Parganah.	Increase.	Decrease.	Remarks..
Meerut, ...	...	45	58 villages transferred to and 13 received from other parganahs.
Sardhana, ...	2	...	5 received from and 3 transferred to Muzaffarnagar.
Barnáwa, ...	...	8	18 received from and 26 transferred to other parganahs.
Jalálabad, ...	39	...	43 received from and 2 transferred to other parganahs and 2 to Dehli.
Dásna, (Gháziabad.) ...	...	47	14 transferred to Dehli, 35 to other parganahs, and 2 received.
Baraut, ...	4	...	20 received and 16 transferred to other parganahs.
Bágpat, ...	...	19	21 transferred to other parganahs and 2 received.
Kutána, ...	11	...	11 received from other parganahs.
Chhaprauli, ...	...	4	2 transferred to Baraut and 2 to Muzaffarnagar in May, 1853.
Niloha-Tárápur, ...	...	9	1 gained by alluvion, 2 received from Muzaffarnagar and 12 from Meerut, 14 transferred to other parganahs, and 10 to Muzaffarnagar.
Kithor, ...	60	...	61 received and one transferred.
Hápur Gaura, ...	38	...	52 received and 14 transferred.
Saráwa-Ajrára, ...	...	12	10 received and 22 transferred.
Púth, ...	1	...	1 received from Garhmuktesar.
Garhmuktesar, ...	...	34	34 transferred to other parganahs.
Loni, ...	...	112	2 transferred to other parganahs and 110 to Dehli.
Total, ...	155	290	
Deduct increase, ...	...	155	
Net decrease, ...	...	135	

In May, 1853, the district was arranged amongst the following tahsíls:—Meerut, 323 estates; Sardhana, 154; Bágpat, 277; Murádnagar, 266; Hápur, 329; Mawána, 289, or a total of 1,638 estates. The head-quarters of the Murádnagar tahsíl were subsequently (1859) transferred to Gháziabad. In 1859 Loni was restored to Meerut and then included 130 villages, comprising 132 estates, of which 104 were a portion of the 110 given over to Dehli in 1852, and 26 were new villages formerly belonging to the Dehli district, giving an increase of 99,784 acres to the area of the district. The number of inhabited villages in the

[1] It would take months of labour to exhume and arrange the statistics of the villages transferred and received in 1853, so as to bring the result in accord with the state of the district in 1865 and 1872, when the regular statistics of the district were compiled, which moreover, from the care taken in their preparation, are the only valuable ones that we possess. See Collector to Commissioner, No. 181, dated October 30, 1841, and G. O. No. 1506, dated April 22, 1853, on both changes.

present fiscal subdivisions are shown in the table given above, and represent the results of the union and partition of estates and the changes caused by alluvion and diluvion as found in 1872. Amongst the old subdivisions which have been allowed to fall into disuse are the following:—Garhmuktesar contained the tappas of Dahána Bagsár (now called Gangadhar Bazar) and Garhmuktesar; in Hápur were tappas Gaura or Gohra, Hájipur and Hápur; and in Saráwa the tappas of Bhojpur, Kharkoda, Saráwa and Kithor (now in the Mawána tahsíl). These maháls were in the *dastúr* of Meerut, which was subordinate to the chakla of Sikandarabad (now in the Bulandshahr district), and the chakla itself was in the sirkár of Saháranpur and súbah of Dehli. Tappa Láwar and twelve others were included in parganah Meerut. The tappas of Chhaprauli are given under the notice of that parganah.

Civil jurisdiction.

The munsif of Meerut has civil jurisdiction over the Meerut, Hápur, and Mawána tahsíls and the Sardhana parganah, and the munsif of Gháziabad over the Bágpat and Gháziabad tahsíls, and the Barnáwa parganah. They, together with the munsif of Bulandshahr, are subordinate to the Civil Judge of Meerut. Up to 1858 there was a munsifi at Hápur, which was then transferred to the Meerut munsifi. In 1861 the Sardhana munsifi was transferred to Gháziabad. The parganah *kázis* were entrusted in the early times of our rules with civil jurisdiction, and were called native commissioners, and subsequently munsifs. Up to 1814 they received two per cent. on the institution fees in suits tried before them, and their jurisdiction seems to have been conterminous with that of the thánadár or police-officer. In 1832 the munsif system as now existing was established. The Judge used to have an assistant called a "register" (!). The Civil Judges known as Sadr Amíns and Sadr-us-Sadúrs were appointed at the same time as the munsifs, and are now known as the Subordinate Judges. The following table gives the number of courts in existence in the district in the years named:—

Names of courts.	1822-23.	1850-51	1860-61.	1875-76.		
Magistrates' courts, ...	1	7	11	17		
Civil Courts, including revenue, ...	...	10	10	15		
Covenanted officers at work, ...	2	5	4	4		

In 1822-23 there were four revenue courts, those of the judge, register, and the kázis. Criminal cases used to be decided usually on the kotwál's report. The courts of the honorary magistrates and of canal officers invested with

criminal jurisdiction are included in the entry for 1875-76. In the same year the temporary court of the Settlement Officer is included among the civil courts, and that officer among the covenanted civil officers employed in the district. There are thirty-two police-stations in the district, each of which is noticed separately under the town in which it is situated. The establishment in Meerut in 1875 comprised the Commissioner of the Division, the Civil and Sessions Judge, the Magistrate and Collector, three covenanted Assistants, two Deputy Collectors, six Tahsíldárs, a Subordinate Judge, two Munsifs, the Superintendent of Police, Superintendent Central Jail, Cantonment Magistrate, Civil Surgeon, Inspector of Education, 1st Circle, a Chaplain, and four Honorary Magistrates, besides a very large military establishment.

General appearance.

The Meerut district is in shape nearly a square, presenting a level alluvial plain without any hills or even eminences of any magnitude. The top of the fifteenth milestone from Meerut on the Muzaffarnagar road has an elevation of 772·2 feet above the level of the sea, diminishing to 739·3 feet at the Meerut church, and following the Grand Trunk Road to Aligarh, the tenth milestone shows an elevation of 720·93 feet; Kharkoda encamping-ground is 713·51 feet, the eighteenth milestone is 705·3 feet, and Hápur encamping-ground is 692·94 feet. This sufficiently shows the slight nature of the fall in elevation from the north to the south of the district. The following table of ascertained heights above the level of the sea is taken from the table of heights published by the Great Trigonometrical Survey. (See further the notices of Meerut city, Dateri, Dholri, Saini and Saroli):—

Heights.

	Feet.
Top of 15th milestone from Meerut, ...	772·20
Ditto 14th ditto ditto, ...	770·00
Ditto 13th ditto ditto, ...	766·20
Ditto 12th ditto ditto, ...	762·60
Ditto 11th ditto ditto, ...	761·43
Syphon canal bridge parapet of drain, ...	757·89
Dhaurára chauki, ...	753·25
Top of 8th milestone from Meerut, ...	754·80
Ditto 7th ditto ditto, ...	753·38
Ditto 6th ditto ditto, ...	750·18
Ditto 2nd ditto ditto, ...	741·08
Meerut Churchyard (I.), N.-W. corner,	734·46
Ditto (II.), W. wall, ...	735·47
Ditto Church central west doorway, ...	739·30
Top of 1st milestone on Aligarh road, ...	733·35
Ditto 2nd ditto ditto, ...	735·49
Ditto 3rd ditto ditto, ...	733·62
Ditto 4th ditto ditto, ...	732·79
Ditto 5th ditto ditto, ...	730·25
Ditto 6th ditto ditto, ...	729·03
Ditto 7th ditto ditto, ...	724·59

	Feet.
Top of 8th milestone on Aligarh road,	722·04
Ditto 9th ditto ditto, ...	721·53
Ditto 10th ditto ditto, ...	720·93
Kharkoda encamping-ground, ...	713·51
Top of 11th milestone on Aligarh road,	719·95
Ditto 12th ditto ditto, ...	715·52
Ditto 13th ditto ditto, ...	711·05
Ditto 14th ditto ditto, ...	710·49
Ditto 15th ditto ditto, ...	708·38
Ditto 16th ditto ditto, ...	706·21
Ditto 17th ditto ditto, ...	701·23
Ditto 18th ditto ditto, ...	705·30
Hápur encamping-ground, ...	692·94
Surface of plinth of 19th milestone, ...	699·56
Top of 20th milestone on Aligarh road,	696·92
Ditto 21st ditto ditto, ...	695·12
Surface of plinth of 23rd milestone, ...	691·25
Top of 24th milestone on Aligarh road,	693·44
Ditto 25th ditto ditto ...	687·30
Ditto 26th ditto ditto ...	690 40
Ditto 27th ditto ditto ...	690·10

The eastern portion of the district is very well wooded, and to the west portions of the tahsíls of Ghaziabad and Hápur and the entire Bágpat tahsíl are

thickly sprinkled with mango groves, and along the canals there are lines of fine *shísham* and other trees, but with the exception of some large patches of *dhák (Butea frondosa)* there is nothing that can be called jungle. There must be a large yearly decrease in these tracts, for in all directions they are being encroached upon by the plough. There are no *úsar* plains in the district, and the comparative absence of the saline efflorescence known as *reh* is marked. The only tracts that are said to be affected by it in any material degree are the low-lying lands of the Hindan and the Ganges river bed near Hastinápur, and in these cases the saline matter may have been brought down in time of flood. From a statement of barren lands, including village sites, in this district, it appears that under the measurements of Regulation IX. of 1833 there were 233,453 acres barren, and under the measurements of the present settlement 190,018 acres, showing a decrease of 43,435 acres. This is due, in a great measure, to the fact that in the former settlement many tracts were entered as *úsar* or barren which were in reality fallow. In the Loni parganah, owing to the pressure of labour on the culturable area, the barren area has fallen from 21,469 acres to 13,410 acres. In Bágpat the barren area has been reduced by one-half, or 13,000 acres, and similarly throughout every parganah the land returned as barren has been considerably diminished. This has occurred, though the *úsar* tracts in many resumed *jáyírs* and revenue-free patches have been included in the returns of the recent settlement. There are no hills in the district, and with the exception of such *tilás* as the Lákha Mandap of Barnáwa and a few *kheras* or mounds, and here and there a low sandbank, there is no rising ground anywhere. The whole district is a well-cultivated plain, and the ground is nowhere uneven save in the *khádir* or river-beds. This uneven land is called by the inhabitants *khaola*, and sometimes *khála* or *khala-ki-zamín*.

Soils.

In this district there are six classes of soil recognized by the cultivating population:—*dákar* land, which is loamy; less loamy soil is called *mattiyár*, and still less loamy soil, *seota*. In *rausli* sand is found, more sand still in *bhúr*, and *ret* is altogether sand and uncultivable. All the principal crops grown in the district may be produced in *mattiyár* and *rausli*. Rice, gram and peas are sown in *dákar*, and *bájra*, *moth*, *tára*, and *til* in *bhúr*. Large tracts of *dhák* jungle have been brought under the plough at a comparatively small expense, and by the application of manure have been rendered highly productive; but it must be remembered that the *dhák* never flourishes in a really bad soil. Besides these jungle tracts, patches of *daldal* (or sandy bog) and *rehwáli* (or land on which *reh* has accumulated) have been reclaimed by Mr. John Michel of the Dásna factory. The *daldal* has yielded to extensive and deep drainage works, and the reclamation of *rehwáli* has also been most successful. The plan adopted by Mr. Michel was first to plough the land on which *reh* was found. Then large quantities of vegetable matter, usually the refuse

indigo stalks, called in this district *sítí*, were burned on the ground, and the ashes, and afterwards the silt brought down in the canal rajbahas, were ploughed in. A few more ploughings and the application of more vegetable manure makes the land productive. Some land that has been reclaimed is now bearing excellent crops. The drawback is that the expense necessarily incurred is equal to the market value of good *rausli* land. It is said by some zamíndárs that land on which *reh* has accumulated after ten years of canal irrigation may be recovered by a plentiful sprinkling of manure and by allowing the land to lie as mere *baráni* (or rain-irrigated land) for two or three years. This is very probable, for by shutting off the canal supplies the land is allowed to become dry, and it is almost a matter of certainty that *reh* is never produced except by the water-logging of the soil which zamíndárs are constantly bringing on themselves by recklessly over-irrigating their fields.

Pasture lands.

There are no wide uncultivated pasture grounds in the district except the Ganges *khádir*, where it is estimated that from eight to ten thousand head of cattle are occasionally grazed during the year. But the value of this pasture ground is diminished by the fact that the grass which grows most luxuriantly is *panni*. This grass is coarse and injurious to cattle, and in the rains no grazing can go on. The *khádir* is very wide, and the grazing lands in some parts extend up to the Búrh Ganga, or old course of the Ganges, some five miles inland. Generally no fees are paid by the zamíndárs of the neighbouring villages, but when, in times of scarcity of fodder, cattle are brought down from Meerut, Hápur, and distant villages, a rate of six annas the acre is levied, and the few Chamárs and Ghosís who make grazing their principal occupation receive two annas a month for each cow or ox, and four annas a month for each buffalo. In the village of Púth alone there are 662 acres of pasture grounds, and in the parganahs of Púth and Garhmuktesar 15,472 acres. The cantonment grazing grounds are extensive, and produce an annual income of Rs. 4,000 to 5,000. The graziers on these grounds are mostly Musalmán Gadís and Ghosís. There are other pasture grounds on the banks of the Hindan and Jumna, but these are small in extent.

Lines of drainage.

The general direction of the drainage is towards the south, and in viewing it as a whole the district may be divided into four tracts running parallel with each other from north to south. The first of these lines lies between the Jumna on the west and the Hindan on the east, and may be called the Jumna-Hindan Duáb. It is the richest tract in the entire district, consisting of rich black loamy soil, which renders the parganahs within it the most fertile in the district. It is bounded by narrow strips of soil of inferior quality skirting the two rivers, and appears to stretch without interruption

The first tract.

from Chhaprauli on the north, well into parganah Loni on the south, where it narrows into a tongue of land stretching far into the Hindan-Jumna *khádir*. It is here bounded on the east by the river Hindan, and on the west by the high ridge separating the uplands from the Jumna *khádir*. As this ridge is approached the soil deteriorates and on the ridge itself is very inferior, being broken by small ravines and having an irregular surface. Below the ridge the wide expanse of the Hindan-Jumna *khádir* is met, which stretches into Dankaur in the Bulandshahr district and gives rise to a number of shallow depressions, which, however, are nearly always covered with water to the depth of two and three feet. The upper portion of this alluvial tract contains good soil and is highly fertile, but the lower portion towards the Jumna consists only of wide expanses growing the poorer grasses used for thatching. To the north, the sluggish streams known as the Krishni and the Bánganga conveys the drainage into the Hindan on its right bank; further south the drainage lines are ill defined.

The second tract.

The second tract, comprising the lands lying between Sardhana on the north, the Hindan watershed on the west, and the Ganges watershed on the east, has a slope towards the east. To the west the boundary may be traced by the course of the Ganges Canal, which here follows the watershed between the Hindan and the East Káli Nadi. To the north this central tract is nearly level, as shown by the slight cut required to lead the waters of the West Káli Nadi from near its confluence with the Hindan into the Khodára Nála, a tributary of the East Káli Nadi. From the east, too, the drainage lines converge in the form of the Chhoiya on the same stream. In fact, east of the Ganges Canal the entire drainage is carried off by the Eastern Káli or its tributaries into the Bulandshahr district. The natural formation of the stratum which composes the floor of this basin is described as slightly sandy, of a reddish colour; and Mr. Forbes gives a very clear description of the way in which drainage converts it into sand. But, except when immediately affected by drainage, the whole of the central tract is a level plain without appreciable incline, which becomes consistent and loamy wherever a flat or depressed surface favours the accumulation of deposit, and is not subject to impoverishment by drainage. When, on the contrary, it is cut up and traversed by drainage, the soil becomes more or less sandy and unfertile. The main difference between the northern and southern portions of this central tract is, that while the north receives little of the accumulated rainfall from other places, the south is plentifully supplied with water by the drainage lines from the north. There is a still greater difference between the west and the east tracts. The west consists mainly of level land full of alluvial accumulations, and especially in the south has much rich loamy soil, all of which is culturable; but to the east the surface of the country is not only broken up by the central lines of drainage, but on its most easterly edge begins to exhibit the deteriorating influence of the Ganges.

The third tract.

The third tract is that which is affected by the drainage towards the Ganges. Its chief characteristic is the presence of rolling waves of sand which continually change their position. They chiefly follow the lines of drainage, and throw out lateral spurs of the same character as they proceed. These sand-dunes no doubt owe their origin to the mixture of sand in the stratum through which the drainage lines run. The sand left behind by the drainage is blown into banks or dunes by the wind, which in some instances drives the sand over the entire surface of the plain. These dunes are by no means confined to the immediate vicinity of the Ganges, and although the course of the drainage and the presence of a canal marks a level watershed east of the large central tract which intervenes between the drainage southwards to the Káli Nadi and the drainage eastward to the Ganges, yet sand-dunes are found running along the drainage lines on the Káli Nadi side as well as on the Ganges side. One more remarkable than the rest follows the direction of the drainage from the Saháranpur district in the north to the Eta district in the south, passing close by the city of Meerut, where it is used as a butt for artillery practice. Both the Saráwa and part of the Hápur parganahs are greatly impoverished by the drainage which is thus concentrated, and there is so much sand in Saráwa that there is little doubt that it is one of the poorest parganahs of the district. As a rule, the interstices of the level plain left between the sandy undulations and slopes of the central drainage tract are wider than those found in the approach to the Ganges valley. These level interstices are capable of very high cultivation, and are, indeed, in character the same as the level plain of the second division, to which they really belong, while the sandy undulations rank in the third class, which consists mainly of the sandy incline to the river Ganges. The alternations of good and bad land appear to be sometimes very remarkable; but as the eastern slope is approached the level intervals seem to become fewer in number, narrower in width, and more liable at any future time to be overlaid by the still restless sand-dunes, until they disappear altogether in the ravines of the Ganges cliffs, which are slowly and surely eating their way further and further inland. The fourth tract is the well-known low *khádir* land of the Ganges valley. It is bounded on the east by the river Ganges, and on the west by the raviny cliff, under which, for three-fourths of its length from the north, runs the Búrh Ganga, an old bed of the Ganges, which is connected with the main stream by several smaller water-courses. The *khádir* is said to be very capable of cultivation, but it is in many parts covered with grass jungle, full of pig and other wild animals, for which the cultivation which might take its place is not substituted through the neglect of bad cultivators and unimproving landlords. The prevalence of poor soils and the over-saturation of the good

Fourth tract.

soils from the increased volume of water in the Búrh Ganga have, no doubt, much to do with the backwardness of this tract. To such a degree has the latter evil increased of late years that, in 1874, it was reported that "more than half the cultivated area of the villages along the course of the Búrh Ganga has been rendered unproductive." A scheme is under preparation for the relief of these lands, and it will then be seen how far the *khádir* of the Ganges in the Meerut district is capable of improvement.

Minor reticulations within each tract.

Each of these drainage tracts has a minor system of its own, carrying into the main arterial lines the surplus waters of smaller drainage areas, which are again subdivided within themselves until the difference in the level and the direction can only be detected by the most minute and careful processes. The differences in the heights throughout the district and in the levels along the course of the canal have been given already, and will materially aid in the elucidation of this important drainage question. Amongst the minor drainage lines of the central tract the most important is the Abu cut from the Western Káli, which crosses the line of the canal near Chabandi in parganah Meerut, and flows in a south-easterly course to the East Káli river.

In 1868-69 the núla was cleared out and otherwise improved in its upper branches, and a diversion cut was excavated north of Meerut to carry a portion of its waters by a more direct line to the East Káli Nadi. The portion of the núla running through Meerut was repaired and enlarged at the same time, but still showed such defects that orders have recently been issued for the execution of a project embracing the thorough and efficient drainage of the city and cantonments. Connected with the núla is the Alipur line of drainage, which begins at the line of *jhíls* to the north-east of the town of Sardhana, and runs through the villages of Kalinjar, Madárpur, Alipur, and, by a culvert, beneath the canal distributary until it finds its way into the old Abu cut at Pábli. A second line commences to the south of Sardhana at the village of Mandiai, and passing close to Bahádurpur and Paholi, becomes a marked line in the *dhák* jungle of Bajhera, near to which it joins the Abu núla. The Sardhana artificial drainage cut is a valuable line, which extends considerably to the south of Nánu, and thence through Naurangpur and Kalína into the Hindan ; it was completed before the rains of 1874, and, except at the very head, has proved efficient. A scheme known as the Khádirabad drainage system, and comprising five cuts, one each at Dhandala, Khádirabad and Hawal, and two at Shaikhpura, drains the country lying to the left of the main canal from Dhandala by Begamabad to Bhatiána, and tails into the East Káli Nadi. All the drainage to the south of Bajhera forms a portion of the head-waters of the great Saráwa line, which eventually joins the Káli below Hápur. A second and somewhat parallel line collects to the south-west of the Saráwa line as far north as Bhola

and Jáni khurd on the canal, and passing by Begamabad and Bhojpur enters the East Káli about a mile below the Saráwa drainage line, just on the borders of the district. The drainage to the east of the Káli is collected by the Chhoiya from Niloha southwards, and the bed of this stream has been widened and improved. A second branch of the Chhoiya running between the left main distributary and the canal, and having a catchment basin which extends from the neighbourhood of Sardhana to a point opposite Meerut, is to be provided for in the Karauli drainage scheme. At present syphons exist at all the distributaries by which it is crossed except one, which is cut in the rains to admit of the passage of flood water. West of the Ganges Canal a line of drainage starts from Niwári, which runs through Sohána into the Hindan, and south of the Bhola falls on the canal are the partly artificial and partly natural drainage lines of Kaura and Shaikhpura. Another important minor line of drainage between the Ganges canal and the Hindan is that connecting the *duhurs* of Mattiyála, Kusalya, Dásna, and Masúri in parganah Dásna, which runs thence through Sháhpur, and finally discharges itself by a well-defined channel between the villages of Chhapiyána and Chhaprauli into the *khádir* near the junction of the Hindan and the Jumna. The surplus rainfall to the east of the town of Dásna runs in a line between Pípalhera, Shaikhupur, and Amapur Lodha, and floods the lands of Hasanpur in the rains. This line of drainage is much obstructed by the Masúri rajbaha, and only finds an outlet for its waters in the Bulandshahr branch of the Ganges canal. Another line in the same parganah, starting at Náhal, and running through Dabársi and Galand and on to Dhaulána, has been so impeded by distributaries as to cause serious swamping in the town of Dhaulána. To remedy its condition and to drain the country lying between the canal and the left main distributary, from Dásna to Baral in the Bulandshahr district, a series of cuts are now in course of construction. It is also intended to utilise, as far as possible, Mr. Michel's cut, and the drainage of the Hasanpur *jhíl* will form a portion of the Kot drainage scheme in the Bulandshahr district. The drainage from the north-eastern portions of parganah Dásna and the south of Jalálabad finds its way by Faridnagar, Pilkhua, Khairpur and Dahpa into the Begamabad and Bhojpur line. A survey is now being made, and measures will soon be taken to improve the outfall of the East Káli Nadi to the latitude of Bulandshahr, and as it will now have to carry off a considerably increased flood volume, due attention will be had to this fact in all designs for bridges and works connected with it.

The Jumna tract.

The minor drainage lines of the Jumna parganahs are quite local, and the areas drained by them are very small. The drainage system known as the Kirthal is a tributary of the Jumna, and embraces an area of about 50 square miles, of which about seven square miles lie to the east, and the remainder to the west of the Eastern Jumna Canal.

Kirthal drainage scheme.

The general direction is from north to south, the length to where it begins to fall into the Jumna valley is about 18 miles, and the average breadth about 2¾ miles. The limits of the system on the north is the Kándhla minor distributary, which leaves the canal at the 79th mile; on the east, the canal from the 79th to the 83rd mile, a watershed to the west of the canal from the 83rd mile, and rejoining it three miles further south, the canal again to the 92nd mile, and a watershed to the east of the canal from the 92nd to the 96½ mile: on the west, the Kándhla distributary to near the village of Hewa, thence a watershed running between the Kándhla and Nála distributaries and meeting the latter near the junction of the Rúmala distributary, and beyond that the Nála distributary. The whole area is irrigated more or less from the canal, and the evils arising from over-saturation were felt ten years ago, and led to the excavation of the Kirthal drain in 1866-67, which tails into the Jumna near Khánpur. This cut was never completed to the depth intended. It is now proposed to make this drain the main artery of the new scheme, and by means of branch drains from all the minor catchments to tap all the principal depressions in the tract; culverts and syphons will be provided under all distributaries which at present obstruct the drainage. The main drain will have a slope 1·75 per mile, and will carry four feet of water, the bed width varying from six to twelve feet, and the side slopes being everywhere at an angle of 60°. A portion of the drainage near Kakripur to the north of the Kirthal scheme passes below the Eastern Jumna canal into the Krishni Nadi in the Baraut parganah.

Aláwalpur drainage line.

The drainage system known as "the Aláwalpur system," from the village near which it crosses the canal, is also a tributary of the Jumna. Its catchment down to the Baraut and Bágpat road, where it passes through the Jumna *bángar*, is 36 square miles, and is bounded on the north by the Kirthal system; on the east by a system discharging into the Hindan river; on the south by a system known as the Deola, which also discharges into the Hindan; and on the west by the Jumna *bángar*. The general direction is south-west. This drainage line is not well defined until it crosses the canal, when it becomes a broad and easily traced valley, gradually deepening as it nears the Jumna, which it joins close to Bágpat. Shortly after crossing the canal it is joined by a branch of considerable size, which, starting from near Barauli to the west of the canal, runs with a southerly course parallel to the canal to its junction with the main line. There are three other minor depressions connected with this system,—one to the east of the canal near Aláwalpur, which joins the main line at the canal; one to the south-west of the canal from Kayámpur, and a third close to Shaikhupur, which joins the Barauli branch. The outlet is at present obstructed by the canal, by distributaries and by watercourses, and it is proposed to remedy

this by excavating some five drains—the main drain and the Idrispur, Kayámpur, Barauli, and Shaikhupur branches. The existing main drain commences in some depressions near Bajraul in parganah Baraut, and enters the *khádir* of the Jumna after a course of 15½ miles. This will, in the new project, still form the main arterial line. To complete the drainage schemes of the Jumna parganahs, a very large drainage area known as the Deola tract lying along the left bank of the canal from mile 99 to mile 117 has been surveyed, and in connection with it a scheme for its drainage has been prepared. When this has been taken in hand, and a few minor drainage cuts to the west of the canal have been excavated, all that is known regarding the present drainage requirements of the lands bordering upon the Eastern Jumna Canal will have been completed. The original drainage line to the west of the canal can still be traced by Ládwári and Niwári to the Jumna. Another line known as the Khekara line rises to the south-east of the village of the same name in parganah Bágpat, and runs past Firozpur and Nagla Bári in the same parganah, and Gansaul and Charauri in Loni, into the canal at its 122nd mile near Shaikhpura. It has no defined channel until it reaches the village of Gansaul. The canal occupies the lower portion of its original course, and before the canal was excavated this line used apparently to run by Shahdara to the Jumna.

Rivers.

The principal rivers of the district are the Ganges, Jumna, and Hindan. The Ganges enters the district from the east of Muzaffarnagar, and flows at first in a southerly and afterwards in a south-south-westerly direction, separating this district from Bijnaur and Moradabad. It receives in its course the Búrh Ganga or old bed of the Ganges. The velocity of the stream varies at different periods of the year. In July and August boats descend at the rate of 45 miles in a day of twelve hours, and in September and October from 15 to 20 miles; but in the winter months, November, December and January, not more than eight or nine miles. Since the opening of the railroad the Ganges in these parts is not so much used for carriage as formerly, and owing to the distance of the stream from the banks can be of very little use for irrigation. Fruits of the melon kind alone derive advantage from its waters, and the cultivation of these is very small in the *khádir*. The only town of importance on its banks in this district is Garhmuktesar. The bed of the Ganges is sandy, with here and there an underlying stratum of *kunkur* or nodular limestone. The banks suffer slowly from erosion, but loss from diluvion or gain from alluvion seldom occur, though one village, however, has been entirely swept away by floods within the last four years. The action of the Ganges in time of flood in former years, when it occupied the course of the Búrh Ganga, must have been considerable, for it is given as a cause for the abandonment of the old city of Hastinápur for

Ganges.

Kausambhi many centuries before the Christian era. Regulation IX. of 1825 and the instructions of the Board of Revenue regarding alluvion and diluvion are in force throughout the district. It is said that the village administration papers of the recent settlement do not contain any special rules for the settlement of disputes between riparian proprietors, and that the general law applies in all such cases. There are no islands or remarkable *chars* in the Ganges, but there are several of the latter of some extent in the other rivers of the district. The banks of the Ganges are gently sloping on the one side and abrupt on the other, according to the position of the main stream. The beds of the other rivers are nearly all situated in shallow depressions, extending on each side from a quarter to three-quarters of a mile in extent. In some parts the Ganges valley, known as the *khádir*, is over five miles in breadth. The Ganges is only fordable at particular places during the cold weather, one of which is Púth. It is at all times navigable for vessels not exceeding 100 maunds burthen in this district. There are no rapids or eddies *(bhanwar)* in any of the rivers except during the rains. There are ferries during the rains and bridges-of-boats during the cold and hot seasons on the Ganges at Garhmuktesar and lower down at Púth Sakratila. Above these are Rauli, Dáranagar, Jáfirabad and Makhdúmpur, the management of which is in the hands of the Collector of Bijnaur. Up to 1844 the Garhmuktesar ghát was in charge of the Collector of Moradabad.

Jumna.

The Jumna enters this district from Muzaffarnagar and flows in a south-south-westerly course along the western boundary of the district. It receives on its left bank the surplus waters of the Eastern Jumna canal in parganah Loni. The bed of the river is so low that irrigation from it is impracticable, and its waters are only used for the cultivation of melons, which grow in great luxuriance and are much prized for their excellence. The towns of Chhaprauli, Kutána, and Bágpat are situate on the high bank of the river, and lower down, but not on the banks, are Loni, Shahdara, and Patparganj, the last of which is only a mile distant. Loni is three miles from the Jumna, and Shahdara but two. In time of heavy flood the river approaches close to the skirts of these towns, but the Jumna, though the stream is very deep and strong, seldom causes alluvion or diluvion. Every October an examination is made of the villages liable to fluvial action, and wherever a change exceeding ten per cent. of the culturable area has occurred, a readjustment of the land-revenue is made. In the Bágpat tahsíl the banks of the river are frequently steep and abrupt, especially near the sites of the larger towns; lower down, in Gháziabad, they are sloping in all places and low. Occasionally eddies appear, but they are nowhere found obstacles to navigation. In the hot weather, the river is fordable nearly everywhere in this district, and is navigable only for boats of less than 100

maunds burthen. There is a public ferry at Salímpur just opposite Dehli, where there was formerly a boat-bridge, but since 1866 the passenger traffic has been provided for by the railway bridge. There are private ferries at Jagatpur in parganah Loni called Ghát Wazírabad, from the town of that name on the opposite side of the river, and in the same parganah at Badrpur and Chilla Saraudeh, called respectively Ghát Barári and Ghát Okhliya, from the villages on the other side of the river. There is another ghát at Bágpat, managed by the Collector of Meerut. In May, the melting of the snow, within the drainage area of the Jumna in the hills, causes a considerable rise in the river, but not so much as in the rains. The low cultivation alone is benefited by these floods, whilst everything else is damaged, and very frequently the injury caused is considerable. Navigation has decreased very much since the opening of the Eastern Jumna canal has reduced the volume in the river, and recently the construction of the weir at Okhla, for the head-works of the Agra canal, has rendered it difficult for boats of 100 maunds and upwards to proceed downwards to Agra. The number of boats engaged in trade is yearly diminishing, as well from these canal difficulties as from the opening of the railway.

Hindan.

The Hindan enters this district from Muzaffarnagar at the village of Pitlokhar, where it is joined by the West Káli Nadi. It thence takes a south-south-westerly course through this district to the Bulandshahr district. The *khádir* of the river varies in width: at Malahra it extends for a mile on each side of the stream, whilst at Barnáwa it is little more than a quarter of a mile in breadth. The river is nowhere fordable in the rains, but at other times there are numerous fords, some of which are not two feet in depth. The Hindan is not navigable except during the rains, when boats ply for the convenience of passengers. There are ferries at Barnáwa and Baleni, and opposite to Malahra is the Nágwa Ghát, the management of which rests with the Muzaffarnagar authorities. There is a bridge of-boats at Baleni. Colonel Cautley in 1840 proposed that a still-water navigable channel should be drawn off from the Ganges Canal, from a point near Murádnagar, to the Hindan, in order to connect the navigation of the Ganges canal with the Jumna. With a view to ascertain the capabilities of the Hindan, he had (transverse) measurements taken of the width and depth at every thousand feet in length, from the bridge which crosses the river near Ghaziabad to the Jumna. These measurements were taken in April, and showed that, with the exception of one place near the village of Gojar, where the depth of water in the river varied from 1·4 to 1·3 foot, the average depth might be estimated at between 3 and 4 feet, on a width varying from 50 to 190 feet. The distance between the bridge at Ghaziabad and the Jumna is 30·25 miles, the course being exceedingly tortuous, and for its whole length through low *khádir*

land.[1] Irrigation from the river, except for melons, is never practised. Land inundated by the Hindan is occasionally cultivated for the rabi crop, and the harvests are very luxuriant. The river water in time of heavy flood sometimes produces *reh* in the low gently sloping lands of the *khádir*, but a short temporary inundation is a cause of fertility, and the succeeding *rabi* is almost invariably a rich one. No alluvion or diluvion is caused by this river. The only town of importance on its bank is Barnáwa. It is crossed by an iron bridge of five spans of 80 feet each near Asthala on the Aligarh and Dehli road, and also by the railway bridge a few hundred yards lower down the stream.

Other streams.

Besides the larger rivers there are several lines of drainage or watercourses deserving of notice, such as the Abu Nala, Bánganga, and Chhoiya Nála, and several *ganda nálas* or drainage cuts, the majority of which have been constructed by the Canal Department. The most important of these minor streams is the East Káli Nádi, usually called the Nágan in this district, which rises in the south of the Muzaffarnagar district and flows southwards by Gesupur and Hápur, and thence onwards through Bulandshahr and Aligarh, until it joins the Ganges in the Fatehgarh district. It contains very little water here except in the rains, and is never navigable. No injury is ever caused by its overflowing its banks. There is a brick bridge over this river at Muzaffarnagar Saini and an iron bridge at Gokalpur or Gesupur. The Chhoiya, a tributary of the Káli, rises at a point close to Niloha in the Hastinápur parganah. It takes a southerly direction, and after a course of about thirty miles joins the East Káli about nine miles below Hápur. Its character is precisely the same as that of the Káli. In the early part of its course it is an ill-defined

[1] The measurements will be found tabulated in Appendix G. of the history of the Ganges Canal by Colonel Cautley. The following table gives the approximate breadth and depth in time of flood, &c., of the three important rivers where they are crossed by each road :—

Road.	In time of flood.		In rains generally		In the dry season.		Nature of bottom.	Number of boats ready	Remarks.
	B.	D.	B.	D.	B.	D.			
Hindan River.									
G. T. R. Aligarh to Dehli.	400	14	400	10	150	7	Silt and sand,	1	Bridge.
Meerut to Bágpat (Baleni).	700	14	300	10	80	7	Clay, ...	8	Bridge-of-boats except in rains.
Meerut to Shámli,...	358	10	225	5	200	3	Sand, ...	*Nil.*	No means of crossing in rains.
Sardhana to Baraut,	380	10	215	5	100	4	„ ...	8	Bridge-of-boats except in rains.
Bágpat to Jalálabad,	700	14	300	10	80	4	Clay, ...	1	One boat in rains.
Daula to Sardhana,	600	14	300	10	80	4	„ ...	1	Ditto.
Krishni River.									
Sardhana to Baraut,	190	11	135	6	75	5	Sand, ...	5	Bridge-of-boats except in rains.
Búrh Ganga.									
Kumruddínnagar,	326	4	100	1·5	dry,	dry,	Sand and clay,	*Nil.*	Fordable in rains.

straggling nála, running through low ill-cultivated land, and, except in the rains, perfectly dry. In the latter part of its course, and on its junction with the Káli, it carries a sluggish stream through a deep section, with a valley more or less extended.

Abu Nála. The Abu Nála, which runs through Meerut Cantonments, consists of a cut from the West Káli Nadi at Faridpur in parganah Sardhana, originally intended to convey the waters of that river to Meerut. The portion of the cut between the West Káli and the Ganges canal is now utilised as a canal escape. To the east of the Ganges canal the Abu Nála is connected with and often gives its name to the line of drainage which runs southwards by Pabli, and under the name of the Khodara Nála forms a junction with the Nágan or East Káli Nádi at Kamálpur. The length of the original Abu cut was only about 12½ miles from the West Káli to the heads of the Khodara Nála; it had a breadth of about 15 feet, and was excavated only a few feet. There is no tradition of its ever having been a running stream, and it could never have been of much practical benefit. The Saráwa line of drainage, already noticed, which joins the East Káli river on its right bank near Mushrifpur, on the borders of the district, assumes somewhat the characteristics of a continuous chain of jhíls in the vicinity of Asaura, in parganah Hápur, with a width of 200 feet and a depth of about two feet. These isolated pools become connected in the rains and form a running stream southwards. The rabi crops close to the edge of this drainage line, as on the Bhojpur line and the lands in the vicinity of the Chhoiya, are excellent; but on the Chhoiya rain-crops are not attempted, whilst on the other two they are sown in favourable years. The Bánganga flows between the Hindan and the Krishni, and enters this district from Muzaffarnagar at the village of Dhanaura, and runs for eight miles to Sháhpur. It is sometimes dry, but in the rains the depth of water is frequently four or five feet. Its breadth is on an average fifty feet, but there is no navigation, and little irrigation from it at any time. Attached to it is a legend that when the great battle of Kurukshetra was fought between Yudhishthira and Duryodhana, the Pándava Arjuna shot an arrow with such force into the earth at Muzaffarnagar that it tore up a furrow as far as Sháhpur, and so deep did it penetrate that water sprang forth and a stream was formed; and to remove geographical difficulties, the great battle is said to have been fought on the east of the Jumna. The word '*bán*' is the Hindi form of the Sanskrit word meaning 'an arrow,' and from Kumaon to Bundelkhand a similar legend is related of all streams bearing the name Bánganga. In parganah Hastinápur the Búrh Ganga enters the district at the village of Saifpur Firozpur, and flows southwards into parganah Kithor as far as the village of Kíratpur Bádsháhpur. In its course it forms one large island, about six miles in length, opposite the village of Hastinápur, and a peninsula of a similar size opposite Nagla Goshain. The western branch of the Búrh Ganga here is known as Jhíl Garhi, and occupies portions of the villages

of Garha, Akbarpur, Humáyúnpur, Garhi, Nagla Gosháin, Agwánpur, Muzaffarpur, Kaunti, and Bágpur. Connected with the Búrh Ganga is a jhíl known from the village of Latífpur, which includes portions of ten villages, but it is dry except during the rains. All through its course small depressions connect the Búrh Ganga with the *khádír* proper of the Ganges; and between it and the Ganges is often a large expanse of water called *soti*, a word frequently applied in this district to the lowlying lands forming a broad shallow watercourse in the rains, and to the subsidiary beds of a stream lying parallel to the main bed. These depressions are usually dry except during the rains. The *soti* here extends from the north of Hastinápur as far as Khánpur Garhi in parganah Kithor, and near this village the southern extremity of the Búrh Ganga is known as the Kála Páni.

Canals.

There are three main lines of canals in this district. That to the west, known as the Eastern Jumna canal, supplies the rich Ját tract of the Jumna-Hindan Duábwith a close net-work of distribution canals. This work was opened in 1830. The second is the centre or main branch of the Ganges canal, irrigating the country between the Hindan and the Káli Nadi, opened in 1855. The third is the Anúpshahr branch of the Ganges canal, watering the tract between the Káli Nadi and the Ganges, and opened in 1860. Between the last two there is a tract occupied by the Káli Nadi and its feeders, which exclude canal channels from the south-east of Meerut, Hápur, and Saráwa. Another tract, cut off from canal irrigation, is the northern half of parganah Barnáwa.

Ganges canal.

The Ganges canal enters the district from Muzaffarnagar. The course of the canal proceeds direct from the heads of the East Káli Nadi and Khátauli until it approaches the town of Sardhana, where it inclines a few degrees nearer to the south, thereby avoiding contact, at the most exaggerated part of the ridge, with a line of sandhills which curve partially around the northern side of the town. The East and West Káli Nadis form the eastern and western boundaries of the canal tract, the line itself however keeping somewhat nearer the latter. The West Káli Nadi in the latitude of Sardhana joins the Hindan river, which by its westerly course, and by a consequent departure from the bearing upon which the Káli Nadi runs, places the canal upon a wider field, the transverse distance between the two rivers being at this point equal to fourteen miles. Higher up, not far from the village of Jawálagarh, the canal channel intersects the Abú Nala. Marks of excavation for the nála commence at two points on the West Káli Nadi, the most northerly near the village of Rámpur, and the other six miles to the south at Faridpur. These two lines form a junction on the right of the canal, and afterwards proceed in an oblique direction across the canal to the head of the Khodara Nala, which passes through Meerut[1] At this point of intersection an escape cut has been made leading along the old line of Abú's cut to Faridpur, a distance of seven miles. The differences of level

1 Ganges Canal, I., 211.

from the bed of the canal to the West Káli river is 23·9 feet, and the works are the same as those described at Khátauli in the Muzaffarnagar district. The canal in its course then passes on its left the towns of Meerut, Begamabad, and Jalálabad, the first at a distance of eight miles from the nearest point of alignment. From Siwal khás a series of curves on radii of from three to five miles commence, for the purpose of meeting the watershed of the country, which henceforth takes a direction more to the east. These curves continue to Rauli, a little below Jalálabad. The width of the country over which the canal passes measured transversely across the canal between the East Káli and the Hindan, is 15·5 miles at Sardhana. This width increases in advance until at Jalálabad the two rivers are 26 miles apart. At Sardhana the canal runs centrically between these boundaries, but as it advances it approaches the Hindan, until at Dhaulari it is only four miles apart. The intervention of the Chhoiya, a tributary of the Káli, has caused this close approximation to the Hindan, and the course of the main canal has been, in a great measure, dependent on this nála and the low lands which lie near it. The slope of the surface of the country is about 35 feet, which averages 1·75 feet per mile, between Púth and Jalálabad. The inclination is slightly towards the east, but the canal keeps to the ridge at Jáni khurd southwards. The land at Jáni khurd is 45·9 feet above the Hindan, and 3·3 feet above the Chhoiya, at a point two miles from its head. At Jalálabad the canal runs at a level 47·5 feet above the Hindan, and 24·6 feet above the Chhoiya, the average level throughout being 43 feet above the Hindan, 16 feet above the Chohiya, and 32 feet above the East Káli Nadi. At Jáni khurd an escape leads into the Hindan with a waterway of sixty feet, divided into ten sluices of six feet each, similar to that leading into the West Káli Nadi. The distance from the canal to the Hindan, at the point where the escape is built, is five miles, and the bed of the canal is here 38·06 feet above the bed of the Hindan.

From Jalálabad the curve commencing at Siwal khás terminates at Dásna, from whence the course is straight up to the 120th mile. The course from its nearest approach to the Hindan at Dhaulari takes a bend to the east, until close below Sikandarabad, in the Bulandshahr district, the canal is only two miles from the East Káli river. Throughout this line the canal is bounded on the east by the Chhoiya and Káli, and on the west by the Hindan. The slope of surface on this section of the canal is 33·3 feet, or 1·6 foot per mile. The width of the Duáb through which it flows may be estimated on an average at 26 miles, including the land cut off by the Chhoiya on the east and the *khádir* lands of the Hindan on the west. The maximum elevation of the canal near the village of Galand is 40·7 feet above the Hindan and 15·5 feet above the Chhoiya. Near the 110th mile, at the village of Dehra, the Bulandshahr branch leaves the canal on the right bank (see BULANDSHAHR DISTRICT.) The irrigation from the main branch of the canal throughout the district is

very complete. Rajbahas or distributaries are spread in a regular network over the country. To the west of the canal is found the right main rajbaha, which enters this district near Aurangnagar in parganah Sardhana, and after throwing off various tributary rajbahas, reaches the neighbourhood of Dásna, where its waters may either run off into the Hindan by the Sadrpur escape or go to feed the Dehra rajbaha. On the east side of the canal is the left main rajbaha (N), which, after throwing off numerous channels, loses its name near Meerut, and becomes a feeder of many large and some small courses in that neighbourhood. From the Bhola falls is another channel called the left main rajbaha (S), which serves as a feeder for all the large rajbahas irrigating the country on the left, and is carried on far beyond the boundaries of this district, in close promixity to the canal and the East Káli Nadi, past Pahásu of the Bulandshahr district, into the Aligarh district. At present there are no new rajbahas in course of construction, nor are any new ones contemplated.

Works on the canal.

The principal works on the Ganges canal in this district are the falls and works at Saláwa, with a waterway of 150 feet, the Abu escape works for the Faridpur cut, and bridges at Atarna, Sardhana, Nánu, Játpura, and Púth. Further south are the falls and works at Bhola, the Jáni khurd escape into the Hindan, and bridges at Jáni khurd, Nagla Newári, Saunda, Didauli, and Murádnagar. Below these are the falls and works at Dásna, the great works of the Bulandshahr branch at Dehra, and bridges at Núrpur, Pípalheri, Rauli, and Nidhauli. Mills are attached to the waste channels of the falls at Saláwa, Bhola, and Dásna but, as yet, very little of the full power in existence is availed of. It is proposed to erect sugarcane crushing mills at these places, and whenever the existing flour-mills require repairs they are to be improved by raising the level of the mill room above the water level and by introducing a better motor power. The entire course of the main line in this district is 52 miles.

Anúpshahr branch.

The Anúpshahr branch of the canal leaves the main stream a little below Jauli in the Muzaffarnagar district, and at the twelfth mile from its head enters this district at the village of Mírpur in the north of parganah Hastinápur. It runs in a southerly direction slightly inclined to the east into the Bulandshahr district. The work has not been completed according to the original design beyond Kithor, but irrigation even now is carried on from it far into the Hápur tahsíl. On both sides, rajbahas have been made, but after the experience gained in constructing and working the main line, main branch rajbahas have not been attempted. There is no navigation on this branch, nor on the small portion of the Bulandshahr branch that runs through this district.

Eastern Jumna canal.

The Eastern Jumna canal enters the district at the village of Kakripur in parganah Chhaprauli, and leaves the district by a cut into the Jumna in parganah Loni of this district. The water of the canal is considered to be far superior for cultivation to that of the Ganges

canal. No damage has yet been caused in this district by the efflorescence of *reh* along its banks nor by the accumulation of silt on the lands watered by it. There is no navigation except for small crossing boats. There are bridges at Kakripur, Rumala, Banil, Bauli, Rustampur, Baraut, Patera, Idrispur, Aláwalpur, Kayámpur, Kheri, Basodha, Paul, Pahládpur, Sayyidpur kalán, Rawa, Mubárikpur, Rataul, Bádsháhpur, Saroli, Sikráni, Gokalpur, Baharpur, Auldánpur, and Salímpur, and mills at Shuklpura and Salímpur. The Eastern Jumna canal irrigates from the main line parganahs Chhaprauli, Kutána, Bágpat, Baraut and Loni, and by means of distributaries Barnáwa is supplied with water.

Navigation.

The navigation on the Ganges canal has considerably fallen off during late years, and, since the opening of the railway, freight has fallen from Rs. 75 to Rs. 15 or 20 per 100 maunds for the conveyance of goods from Rúrki to Cawnpore. Boats of 300 maunds burden can go up the canal. The average depth of water is 5½ feet, the depth of the cutting being about 12 feet. The principal ghâts are at Sardhana, Nánu, Murádnagar, and Bahla or Bhola. The principal articles of transport on the canal are, now, cotton and wood, the former because the danger of fire is reduced and because the cotton is taken down by weight and not by dimension of bales, as on the railway; the latter because the canal head is conveniently situated near the forests in the neighbourhood of Hardwár. The rate for each boat on the canal is now four and a half rupees a month. The following statement shows the traffic on the Ganges canal in the Meerut district for 1870-71. The quantities are expressed in maunds, except bambus and timber, which are given in numbers:—

Name of article.	*Sardhana.*			*Nanu.*				*Bahla.*				*Murádnagar.*			
	1870.	1871.		1870.		1871.		1870.		1871.		1870.		1871.	
	Export.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.
Wheat, ...	20,064	300	...	3,851	...	275	313	...	700	460	162	...	...	...	...
Gram, ...	35	...	1,325	...	100	...	6,910	...	1,058	...	2,666	...	...	...	7,995
Urd, ...	3,180	236	...	999	255	623	...	...	...	490	...	...	...	175	...
Other grains,	340	175	1,104	115	...	191	945	28	896	200	...	...	185	...	410
Cotton, ...	2,068	625	...	45,407	114	24,339	...	2,378	...	2,385	...	1,164	...	1,257	...
Salt, ...	321	...	...	12	...	213	365	...	50	...	...	2,036	...	5,538	...
Sugar, ...	3,518	5,257	...	2,285	...	1,782	...	1,930	...	1,641	...	...	...	...	...
Linseed, ...	...	...	...	...	...	2,299	...	...	210	...	10	...	...	3,089	...
Bambus, ...	200	4,460	...	123,735	490,688	167,745	1,719,363	...	...	...	...	...	...	...	...
Timber, ...	...	...	...	10,447	4,452	11,060	11,281	...	...	...	...	...	...	...	...
Firewood, ...	...	1,500	...	...	3,795	...	...	...	...	...	...	...	...	...	
Miscellaneous,	1,779	71	...	2,666	3,580	9,612	624	...	...	300	440	300	50	...	152
Total Maunds	31,305	8,164	2,519	55,335	7,844	39,334	9,157	4,336	2,914	5,476	3,370	3,500	235	10,059	8,557
Number, ...	200	4,460	...	134,182	495,140	178,805	1,730,644	...	...	...	...	...	...	...	

Jhils.

In parganah Loni there are four jhíls:—the Gházipur, which is 60 × 200 yards and two feet deep; the Kotla, 72 × 963 yards and feet deep; the Makanpur, 207 × 3,200 yards and three feet deep, and the Gharaunda Nimka, 66 × 903 yards and three feet deep. There are five jhíls in the

[1] See Cautley's Ganges Canal I, 385, for further details.

Meerut parganah, Karauli, Pathánpura, Rámpur, Pawarti, and Sodhapur. The Karauli jhíl is the largest, but they are all nearly dry in the cold and hot seasons. There are no jhíls in parganahs Chhaprauli, Kutána, Baraut, and Bágpat. In parganah Dásna, the Karanpur jhíl is 1,200 × 2,100 yards and three feet deep. This jhíl is one of the class locally known as *duhar*, which may be defined as a lowlying tract of waste land subject to annual innundation, the surface of which has a glossy appearance and is usually covered with small red tufa pebbles. Mattiyala is 900 × 1,200 yards and three feet deep, and is called a *soti*. Parpa is 600 × 1,500 yards and two feet deep, and is called a *duhar*. Hasanpur is 1,020 × 1,200 yards and three feet deep, and is styled a jhíl, apparently because it is covered with water all the year round. Rasúlpur, Sikrauda, and Kasalya are known as *sotís*; Sapnávat, Bajhera kalán and Kapúrpur as *duhars*, and the Dhaulána and Mansúri reservoirs as jhíls. In parganah Jalálabad there are jhíls at Sárna, Khakra, Karampur, Jeori, Basantpur, Bhíkanpur, Pasúnda, and Karkar Mandal. There are also numerous artifical excavations for storing water, the principal of which will be noticed under the places where they occur.

Communications. Railways.

The East Indian Railway enters the district to the south from parganah Dádri of Bulandshahr, and after a course of four miles terminates at Ghaziabad, whence it gives off a branch to Dehli. From the Ghaziabad junction, the Panjáb and Dehli line runs on to Meerut, a distance of 27 miles. Twelve miles from Ghaziabad it passes the station of Begamabad in parganah Jalálabad. Two and a half miles north of the Meerut city station is the cantonment station. After leaving the cantonment station the line runs due north to Khátauli in the district of Muzaffarnagar. It has a length of 57 miles altogether in this district. The nearest station to Bágpat is Dehli, a distance of 20 miles; the Meerut cantonment station is nearest the town of Sardhana; Hápur is twelve miles from Begamabad, and Saráwa about eight miles from the same station.

Roads.

The following roads are under the charge of the provincial public works' officials in the district, *viz.*, ten first-class raised, bridged and metalled roads; twelve second-class raised and bridged, but not metalled roads and four third-class country roads, besides village cart-tracks and bridle-paths. The first-class roads are as follows:—

	Miles.	*Feet.*		*Miles.*	*Feet.*
Grand Trunk Road, Meerut, to boundary of Bulandshahr district, ...	29	0	Meerut by Nánu to Shámli,	17	1,825
			„ to Dehli, ...	30	0
Aligarh by Ghaziabad to Dehli, ...	15	0	Ghaziabad to Hápur, ...	22	4,600
			Hápur to Garhmuktesar,	20	0
Meerut to Rúrki, ...	16	2,200	Meerut to Bijnaur, ...	7	1,000
„ to Garhmuktesar, ...	27	0	„ to Bágpat, ...	11	2,700

The Grand Trunk Road from Bulandshahr passes through Hápur and Kharkoda, where there are encamping-grounds at the 372nd and 379th miles from Allahabad respectively. The road from Aligarh to Dehli passes through Ghaziabad, where there is an encamping-ground, and about one mile onwards crosses the Hindan by an iron bridge, and after another mile meets the Dehli and Meerut road. The metalled road to Rúrki passes through Palra, Daurála, Dádri and Dondri into the Muzaffarnagar district. The Garhmuktesar road to Moradabad crosses the East Káli Nadi by a suspension bridge at Gokalpur, and has encamping-grounds at Mau Khás (9th mile), Shahjahánpur (17½ mile), Hápur (21st mile), and at Garhmuktesar, where there is also a dák bungalow. There is an encamping-ground at Begamabad on the Dehli road. The second-class roads are as follows :—

	Miles.	*Feet.*		*Miles.*	*Feet.*
1. Jáni to Bágpat, ...	20	2,850	7. Meerut to Binauli,...	16	0
2. Meerut to Bijnaur,	19	4,160	8. Baraut to Sardhana,	22	0
3. Bágpat to Baraut, ...	12	3,5[illegible]0	9. Bágpat to Ghaziabad,	22	0
4. Meerut to Parichhatgarh,	26	0	10. Loni to Sháhdara, ...	5	0
5. Kithor to Mawána Kalán,	17	0	11. Meerut to Sardhana,	10	0
6. Hápur to Begamabad,	27	0	12. Bágpat to Jalálabad,	22	0

The first road is metalled from Meerut to Jáni, and is entered so far in the first-class; it crosses the Hindan by a ferry at Baleni. The first seven miles of the Bijnaur road are metalled as far as Muzaffarnagar Saini. The unmetalled portion crosses the Chhoiya nadi by a three-arched bridge near Naglá, and passes thence by Bahsúma and Sadrpur to Firozpur. The road to Parichhatgarh passes on to the Kumr-ud-dínnagar ghát on the Ganges. The third-class roads not raised but with occasional culverts and bridges are the Baraut to Tánda road 14 miles; Baraut to Kakripur or Shámli, 11 miles; Sardhana to Dhaula, 23 miles; and Bahsúma to Mawána, 12 miles. Besides these there are good unmetalled roads along the canals. There are altogether 194 miles of first-class metalled roads, 220 miles of second-class roads, and 60 miles of third-class roads in the district, maintained at an average annual cost of Rs. 12, Rs. 8, and Rs. 5 per mile respectively. The Dehli road by Ghaziabad, the Aligarh road by Hápur, the Karnál road (43 miles), the Rúrki road (12 miles), the Garhmuktesar road (32 miles), and the commencement of the Bulandshahr road were all constructed during the incumbency of Mr. T. C. Plowden about 1840.

Climate.

The vicinity of the mountains and the comparatively high latitude and considerable elevation render this one of the healthiest parts of the plains of India. The weather for five months, from November to March, is delightfully cool and invigorating. The prevailing winds are westerly and northerly. In January a light hoar frost is frequently found in the early morning, and through December and January

ice is made by the ordinary plan of laying out shallow earthen pans, and in chill nights these become covered with thin laminæ of ice, which are subsequently stored in pits. In April the hot westerly winds commence. They make the atmosphere sultry, but are not at all injurious to health and never produce the weariness felt during the rains. In the latter part of June, but frequently not until the beginning of July, the rains commence, and, with slight intermission, last till the middle of September. This month is the most unhealthy of the year, being always hot and exhausting. In October, though the days are very hot, the nights become cool and pleasant. Rain sometimes falls in this district in considerable quantities in the latter part of December and the early part of January, and in unirrigated land is the saving of the spring crop.

Rainfall.

The average total rainfall for the whole district for a series of years is shown in the following table :—

Year.	Inches.	Year.	Inches.
1844-45, ...	30·93	1862-63, ...	31·4
1845-46, ...	26·89	1863-64, ...	25·1
1846-47, ...	34 82	1 64-65, ...	19 6
1847-48, ...	34·54	1865-66, ...	19·6
1848-49, ...	21·36	1866-67, ...	26·5
1849-50, ...	37·96	1867-68, ...	29·5
1850-51, ...	21·97	1868-69, ...	17·3
1851-52, ...	18·90	1869-70, ...	17·8
1852-53, ...	20·40	1870-71, ...	35·7
186.-62, ...	27·00	1871 72, ...	34 5

The average for the nine years 1844-45 to 1852-53 was 27·53 inches, and the average over the Meerut Division was 35·82 inches. The average over the whole division in 1860-61 was 12·2 inches, and in 1865 66 was 29·6 inches; during 1869-70 the district fall was 17·8 inches. The high average of the rainfall of this division is due to the heavy rains prevalent in the Dehra Dún and the northern portion of Saháranpur.

The following table gives the total rainfall at the principal stations of the district for the years 1844-45 to 1849-50, from returns existing among the records of the Board of Revenue :—

Name of station.	1844-45.	1845-46.	1846-47.	1847-48.	1848-49.	1849-50.	Average.
Meerut city, ...	28·92	24 10	31·61	40 55	17·75	38 08	30 17
Sardhana, ...	35 04	24·65	57·48	48·28	19·30	39·58	37·39
Baraut, ...	28·86	24·53	32·46	41·53	19·57	33·37	30·55
Hápur, ...	30·79	34·06	31·54	34·48	15·41	52·62	33·15
Bágpat, ...	24 45	21·90	23·18	30 07	14·97	20·38	22·49
Dásna, ...	38	29·67	32·31	31·98	19·53	42·13	32·27

Meteorology.

The accompanying scientific details have been obtained from the officers charged with the meteorological observations in the district. The first table gives the monthly mean temperature in the shade for each month and the mean monthly range. The second and third tables give the monthly readings in detail for two years, 1869 being a year of unusual heat, and 1870 being an average year, with a fair amount of rain. The observations were taken at 4 A. M., 10 A. M., 4 P. M., and 10 P. M.:—

		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual mean.
1870, ...	Mean, ...	...	66	72	81	92	90	86	85	84	79	67	60	79
	Range, ...	...	31	29	33	32	21	14	16	18	31	38	31	
1871, ...	Mean, ...	57	67	73	82	86	87	84	84	85	79	69	59	76
	Range, ...	27	26	35	33	24	18	12	15	20	34	34	28	
1872, ...	Mean, ...	57	61	74	82	90	92	86	86	83	76	68	61	76
	Range, ...	21	26	33	31	32	23	15	17	19	32	34	30	
1873, ...	Mean, ...	59	66	75	86	8·	96	86	85	82	75	66	58	77
	Range, ...	29	31	33	37	28	29	16	16	18	31	33	30	
1874, ...	Mean, ...	54·7	62·4	68·2	84·2	91·1	87·1	83 9	83·5	82·0	76·4	64 5	58·7	74·7
	Range, ...	27·7	28·0	28·2	34·9	30·2	18 2	12·0	13·0	18·0	32·2	36·4	31·2	

Mean Monthly Readings of the Meteorological Instruments at Meerut for the year 1869.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual mean.
Barometers, ...	29·333	29·230	29·091	28·981	28·787	28·653	28·721	28·784	28·855	29·026	29·211	29.206	28·98
Dry bulb, ...	47	53·7	61·4	70	83·7	88·4	92·2	81·6	80	68·5	52 4	48·8	68·1
Wet bulb, ...	43	49·2	56·7	58·3	67·5	74	77·2	77	76·1	63·2	47·7	44·5	61·2
Dew point, ...	38·3	45·4	53 4	48·1	58·4	67·3	75·4	75·3	74·4	60·1	42·8	39·3	56·6
Elastic force of vapour.	·241	·307	41·2	·341	·505	·689	·880	·878	·850	·542	·278	·250	51·5
Humidity, ...	67	74·7	75·8	47·6	44·2	53	80·2	81	79 9	73·8	70·7	71·1	68·2
Barometer, ...	29·394	29·250	29·150	29·042	28·855	28·720	28·769	28·840	28·904	29·087	29·272	29·272	29·04
Dry bulb, ...	60	66·6	75	90 7	102·3	99	90	93·5	88·7	81·5	71·2	61·4	81·4
Wet bulb, ...	51	56·2	63	65·1	75·4	77·8	80·2	80·3	79·4	69·6	58·2	52·5	67·4
Dew point, ...	43·2	48·2	55·5	47·1	63·0	69·8	76·3	76·9	76·1	63·6	47·7	44·6	59·2
Elastic force of vapour.	·293	·333	·446	·354	·592	·724	·913	·924	·903	·610	·341	·304	56·6
Humidity, ...	53	53	53·5	24·5	28·6	39	64·2	66	67·1	55·6	46	50	50·6
Barometer, ...	29·296	29·175	29·086	28·950	28·764	28·629	28·689	28·760	28·828	29·015	29·190	29·197	28·98
Dry bulb, ...	70	70·6	84	101·7	112·2	108·9	94·8	95·9	90·7	85·8	76·6	70·8	88·5
Wet bulb, ...	56	58·4	64·4	67·5	76·1	78	80	80·8	79 4	69·3	59·5	56·1	68·8
Dew point, ...	44·0	43·4	51·7	43 9	58·7	64·5	75·5	75·7	75·5	60·1	46·4	43·5	59·9
Elastic force of vapour.	·300	·283	·393	·297	·511	·620	·880	·891	·884	·551	·325	·292	52·0
Humidity, ...	41	30·7	37·1	14·4	18·4	25	55·5	54	63	43·4	35·8	39·7	38·2
Barometer, ...	29·344	29·222	29·110	29·011	28·785	28·651	28·727	28·782	28·862	29·047	29·231	29·231	29·0
Dry bulb, ...	53	59·2	69·9	78·9	91·8	94·1	85·2	85·1	83·8	71·9	58·5	54·4	73·8
Wet bulb, ...	47	52·7	59 7	61	70·5	75·2	78·3	78·5	77·2	64·6	52·2	48·7	63·9
Dew point, ...	41·6	47·3	53·9	48·3	59·1	60·7	75·8	76·1	74·8	60·7	46·8	42·7	57·8
Elastic force of vapour.	·277	·329	·421	·350	·517	·678	89·3	·903	·865	·553	·323	·283	53·3
Humidity, ...	64	66	63·8	34·3	34·6	42·3	74·4	75	75	63·2	66·2	66·5	60·9
Maxima in sun's rays.	120·	132·1	137·3	155·	160·5	154·	142·	147·	139·	139·7	131·6	124·1	140
Maxima on grass	34·3	39·3	41·6	49·7	65·1	71·2	...	...	...	...	...	...	50·2
Maxima in shade.	73·5	77·3	83·4	99·8	111·8	103·	96·5	96·7	91·7	89	81·9	74·9	90·4
Minima in shade	44·9	47·3	57·9	66·2	81·3	80·6	80·5	79·7	77·6	64·3	49·6	45·8	65·1
Mean of the maxima and minima in shade.	59·2	62·3	70·6	83·6	96·4	97·3	88·5	88·2	84·6	78·6	68·7	60·3	77·8

Mean Monthly Readings of the Meteorological Instruments at Meerut for the year 1870.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual mean.
Barometer, ...	29·179	29·122	29·043	28·955	28·764	28·736	28·683	28·781	28·891	29·038	29·186	29·241	28·96
Dry bulb, ..	45·9	53·7	61·6	67·4	78·8	83·2	80·9	78·1	76·2	67·1	52·5	48·2	66·2
Wet bulb ...	40·6	48·2	55·7	58·5	64	73·8	76·3	76·1	73·8	62·3	47·4	43·7	60·2
Dew point, ...	33·8	42·6	51·1	54·3	54·2	68·0	77·4	75·0	72·9	60·3	42·2	38·5	55·7
Elastic force of vapour.	·195	·280	·386	·402	·445	·698	·943	·870	·811	·530	·273	·239	50·6
Humidity, ...	63·1	67·3	69·5	60·5	44·9	61·3	89·2	87	89·4	79·3	69	70·6	71·2
Barometer, ...	29·238	29·185	29·116	29·028	28·830	28·803	28·735	28·832	28·956	29·089	29·251	29·269	29·02
Dry bulb, ...	58·8	68·3	75·1	86·2	97·5	92·4	86·5	85·7	85·6	84·9	71·4	61·3	79·5
Wet bulb, ...	49·1	56·6	62·4	66·6	70·9	77	80·8	79·5	77·5	71·1	58·4	52·2	66·8
Dew point, ..	39·0	46·5	54·1	54·9	56·0	70·6	79·0	77·4	75·0	64·5	48·9	45·9	59·1
Elastic force of vapour.	·242	·330	·427	·439	·470	·757	·991	·941	·869	·612	·349	·292	56·0
Humidity, ...	48·7	48·4	49·8	36·2	26·7	54·1	79	76·2	71·2	51·4	45·8	53·9	53·4
Barometer, ...	29·160	29·106	29·044	28 945	28·753	28·720	28·664	28·749	28·878	29·006	29·165	29·213	28·95
Dry bulb, ...	70·3	78	81·6	93·8	103 4	97·4	90·6	89·7	88·9	88·6	78·5	70·7	85·9
Wet bulb, ...	53·3	59	63·4	67·8	71·8	77·6	81·9	80·8	78·3	70·7	61·1	56·2	68·5
Dew point, ...	36·9	43·3	50·9	51·9	53·9	69·2	79·1	77 6	74·4	61·9	48·7	43·9	57·6
Elastic force of vapour.	·223	·292	·384	·389	·441	·733	·997	·946	·855	·564	·351	·293	54·0
Humidity	30·3	31·7	37·2	26·1	21·3	45·8	70·1	69·2	63·3	42·5	36·3	40	42·8
Barometer, ...	29·136	29·141	29·080	28·971	28·775	28·738	28·675	28·780	28·903	29·042	29·205	29·257	28·93
Dry bulb, ...	52·0	60·6	66·3	74·6	86·1	87·2	83·5	81·5	78·9	71·8	57·6	53·8	71·2
Wet bulb, ...	45·1	52·3	59·3	62·4	67·3	74·7	80·1	78·1	75·9	65·7	51·3	48·1	63·3
Dew point, ...	37·3	44·7	54·1	54·5	56·3	69·2	79·2	76·8	74·7	62·3	45·6	42·3	58·1
Elastic force of vapour.	·224	30·2	·426	·432	·408	·788	·992	·922	80·2	·571	·309	·275	54·8
Humidity, ..	58	57·3	65	50·6	37·3	59·3	86·5	35·6	87·0	72·8	64·1	66·1	65·8
Maxima in sun's rays.	124·8	131·2	142·4	150·	157·8	147·9	13·7	143·8	140·1	143·1	132·2	120·5	14·0
Maxima in shade.	74	81·5	86 9	97·0	107·7	100·6	93·1	92·6	92·1	94·7	86·6	75·4	90·2
Minima in shade	42	50	58·1	64·8	75·7	80·3	78·6	77·4	74·1	64·4	48·6	44·0	63·2
Mean of the maxima and minima in shade.	58	65·9	72·5	80·9	91·7	90·4	85·8	85·0	83·1	79·5	67·6	59·7	76·7

PART II.

Productions of the District.

Animals.

The wild animals found in the district are the antelope, fox, porcupine, wild pig, jackal, wolf, hare, monkey, and *biju* or grave-digger. The usual rewards are paid for the destruction of wolves, which are somewhat numerous in the raviny tracts along the Ganges. The birds are much the same as those found in the neighbouring districts. The sand grouse *(bhat tittar)* occurs near Ghaziabad, Mansúri in parganah Dásna, and Pabli khás in parganah Meerut. There are also quail, partridge, green pigeons, and all kinds of geese and wild ducks in the winter on the numerous jhíls. The local names of the snakes found in the district are as follow :—

Snakes.

Asgar tapra, about four feet long, of a dust colour, with white lips; this species is said to be very venomous. *Shashker tapra* above of a dirty slate colour, with dirty white lips, and the body dirty yellow. The *phasi tapra* is nearly of an equal thickness throughout; the colour is a

dull brown with a few black spots and white rings : it is about two feet long, and is considered venomous. The *teliya kumudi* is a black variety with a round white head, and very venomous : about eighteen inches long. The *katha kumudi* is smaller, of an almond colour, with white spots on the back ; it appears during the rains. The *karsra harzundi* is of a dirty reddish black colour, with black and white spots on the back, and about ten inches in length. This and the *tápiya kumudi* are considered poisonous. Other species of snakes recognized under separate names by the natives of Meerut are the *pás raundi, shaimkál, tirnár, bainsra, haldiya bish, rúma bish, siyáh bish, haldiya kumus, basiáwara, kauna, haldiya palak, siyáhpalak, lálra palak, puriya palak, kingar, jewan sira, haum túliya, kál kant, phúlpatáwan, haldiya raj bish, dúdhiya raj bish, támba bansi, phúliya bansi, kukhur, gai rewas, sangchor,* and *tellya tapra.*[1] It would be of little practical use to give the native descriptions of these snakes, and the list is given here more as a guide to the idea prevalent of the number of species to be found in the district than as a contribution to its ophiology. There is a considerable trade in the skins of domestic cattle between the upper Duáb and Cawnpore. The deaths registered from snake-bites and attacks of wild animals during 1869 were 25 males and 34 females, during 1872 were 20 males and 19 females, and during 1873 were 22 males and 12 females.

Domestic animals.

As yet there are no particular breeds of horned cattle in this district. The better class of zamíndárs who take an interest in the breeding of cattle have of late years been importing bulls from Hissár, and in some villages the sharers have subscribed among themselves and purchased Hissár bulls, the expenses of which are borne by the village. Doubtless, in course of time, the Brahmani bulls *(bijár)* will be discarded and no longer allowed to perpetuate the present dwarfish breed. The Mysore bullocks are seldom found here. The common country bullock is ordinarily used for agricultural purposes, and its price varies from Rs. 15 to Rs. 70 ; buffaloes are more rarely used. Their cost is from Rs. 20 to Rs. 50. A cow varies in price from Rs. 15 to Rs. 25 ; a sheep from Rs. 1-8 to Rs. 4 ; and a country goat from twelve annas to Rs. 4. The best buffaloes do not give more than six sers of milk a day, and cows on an average not more than two ; the best milking cows are fed on *khál* (refuse of a mustard oil mill), *chari* (young joar), *bhúsa* (or chaff), and *binaula* (cotton seed).

Horses.

The breed of horses has wonderfully improved during the last fifteen years. Several zamíndárs have fine horses by Arab stallions out of Kátha mares and by the stallions of the Government Hápur Stud out of country-bred mares. The average price of the former is Rs. 250 and of the latter Rs. 300. The common country-bred mare is worth from Rs. 130 to Rs. 150. The *tattú* (or country pony) is usually a strong

[1] From a note by H. M. Rogers, C. S.

serviceable little animal, and seldom fetches more than Rs. 50 or 60 and some can be bought for as little as Rs. 15. Mares served by the stud stallions are registered, and after ten months have elapsed from the birth of the colts, the young animals are examined by the stud officers, and if they are approved of, the Government takes them at a price not exceeding Rs. 110 for each colt, and if not approved of the zamíndár keeps them: hence a superior breed of small horses has gradually spread throughout the district. In this district potters (Kumhárs) are the only people who rear donkeys, all of which are of a miserable description. And most of them are deformed, owing to the fact that they are worked from a very early age. The average price of a donkey is Rs. 10 to Rs. 15. A stallion donkey of good breed has lately been introduced into this district by Government. Mules are increasing in numbers, and vary in price from Rs. 25 to Rs. 40. As yet no schemes have been adopted for improving the breed of sheep, which are all small and poor; like goats they are reared and looked after by the Gararíya caste. When sold by the score goats sell for Rs. 40 and sheep at about Rs. 25 a score.

Fish usually spawn in Baisákh and Jeth, and the young fry appear in Asárh.

Fish. The following are caught in all the great rivers and canals: The *anwári, rohu, maháser, mahi, pargas, bhúr, silenda, tipri, tengra, bichhwa, dawar, galdab, sauli, súl, chalga, chalwá, kalbús, mola, barhiya, ár, kurwa, lám, genchi, galwa, phula, bhigan, chila, maghura, piuncha, rori, khajwa, wadar, saktiyan, jhínga, bhakra, chúhiya,* &c. The same fish are found in the Ganges canal as in the Ganges, and except the larger fish, the Eastern Jumna canal has nearly the same species as the Jumna river. In this district little (if any) oil is extracted from fish. The fishermen are mostly Shaikhs and Bilúchis; with a few Kahárs, Kolís, and Khatíks. There are about 220 in the whole district, of whom more than half work as labourers as well as fishermen. The greater number of regular fishermen live in the Meerut tahsíl. There are four modes of catching fish common in the district: by the *tappá* (or bottomless basket), the *jál* (or net), the *shisht* or *shist* or rod, and by forming dams (*band*). Large quantities of fish are caught at all seasons of the year except the rains, when they are said to be impure and are little sought after. The Káli Nadi produces large quantities of *jhínga* and *giroi*. The *maghura* is generally found in stagnant water, and rarely in a running stream. Fish are very largely consumed for food by most classes except the Jains, or as they are usually called in this district Saraugís. The average price of good fish such as *rohu, kalbús,* &c., is from one and a half to two annas a ser. The most expensive are *maghura,* which fetch from three to four annas a ser, and *anwári,* which is usually sold at eight annas. The cheapest fish are the *ár* and *silenda;* these are largely consumed by the lower classes, and are sold at from a quarter to one anna per ser. A small fish called *bhúr* is largely consumed by the same class.

Crops. Kharif.

The rain-crops *(kharíf)* grown in the district are Indian-corn, here called *makai; joár (Sorghum vulgare); bájra (Penicillaria spicata); urd (Phaseolus Roxburghii); moth (Phaseolus aconitifolius); gawár (Cyamopsis psoraloides);* cotton; sugar-cane; rice; *munji,* a small grained variety of rice; *múng (Phaseolus mungo); lobiya (Vigna sinensis); til (Sesamum Indicum); kangni (Setaria Italica); manduwa (Eleusine corocana); sánwán (Oplismenus frumentaceus) sánwak (Oplismenus colonus); pusái,* a species of wild rice; *thor* or *thuhur (Cajanus Indicus* Var.); *sani (Crotolaria juncea);* and *san (Hibiscus cannabinus).* The principal staple crop amongst these is undoubtedly sugar-cane.

Rabi.

The *rabi* (or cold-weather) crop comprises wheat, barley, gram, peas, *kúsum* or safflower, *toriya, sarson* and *tára,* species of mustard grown for the oil expressed from the seeds; *arhar (Cajanus Indicus); chaina (Panicum miliaceum); jai* or oats; tobacco; melons; indigo; *chahora,* a kind of rice; *masína* or linseed; *paunda,* or the thick sugar-cane, grown for eating, *singhára* or water-caltrop; *shalgam* or turnips; *gájar* or carrots; *kahpús,* a kind of rice; aniseed; fenugreek; lentils; roses for rose-water; *ker; karela;* potatoes; red-pepper and other garden produce. *Bathúa (Chenopodium album)* is found in considerable quantities, as well as *dúb* grass, and the cultivation of lucerne for fodder has come into extensive use near Gháziabad. Some hundreds of Kahárs obtain a livelihood by digging up the roots of the *khas-khas,* used for *tattís* in the hot-weather, cutting grass for matting and thatching, and cultivating *múnj* in the Ganges *khádir* for its *sirki,* matting and ropes. The grasses used for thatching are locally known as *múnj, boriya, púla,* and *sentha.* I shall now proceed to give a detailed account of the mode of agriculture and the treatment of the several crops, which will serve as a guide to the practice of husbandry in the entire upper Duáb.

Rotation of crops.

There is, generally speaking, no absolute rotation of crops practised in this district, though practically some system obtains which is as near an approach to a rotation of crops as can be expected in the present state of agriculture. Generally, if the land be irrigated, one-third of a cultivator's holding is allowed by him to lie fallow for one *fasl* or season in the year, but if the land be *baráni* or unirrigated, only one crop is annually produced, and during the other season the land is allowed to lie fallow. Land that was cultivated in the preceding *rabi* is called, when lying fallow in the *kharíf,* "*jaunál*;" and fallow land that was cultivated for the preceding *kharíf* is called "*polcha.*" Starting with an irrigated plot, and with wheat as the first crop for the *rabi* or spring harvest, the *kharíf* crop will be *joár* (maize) or *bájra* with *channa* (gram) for the next *rabi,* and in the *kharíf,* cotton will be cultivated. During the ensuing *rabi* the land will lie fallow. In the *kharíf* sugar cane will be grown; in the following *rabi* the land will lie fallow, and *chari*

for fodder will be grown in the *kharíf*, and after a wheat *rabi*, cotton will be again cultivated in the *kharíf*. Then after a fallow *rabi*, sugar cane will be again grown for the *kharíf*. In *dákar* land the rotation is little: where there is plenty of irrigation the *rabi* will bear gram, and in the *kharíf* rice, and every three years the land during one *fasl* at least must lie fallow. Where irrigation is scanty the land will only bear one gram or one rice crop annually. There is a peculiarity in laying lands fallow in this part of the Dúáb. For half the fallow season the land is said to be *pari*, *i. e.*, it remains just as it was after the preceding crop was cut, but when half the season has elapsed, the land is ploughed usually in two ploughings, and therefore for the second half of the fallow season it is called *báhin*. In some villages, after the fallow succeeding the sugar cane crop, wheat is almost invariably grown.

Manure.

Manure termed *khát* and *khút khúri* is very extensively used in this district. This manure is generally stable refuse, cow-dung, ashes, and the like. No use is made of the bones of dead cattle which are found lying about in such numbers near every village site, and it is feared that Hindu prejudice will never permit the use of this valuable manure. It is only near towns that manure is ever purchased. In villages there is usually as much as is required; for every co-partner in an estate is entitled to the refuse pile of all his own raiyats as Chamárs, sweepers, and field labourers generally. For sugar cane 120 maunds of manure is required per acre, worth Rs. 5; for cotton 60 maunds, valued at half that amount; for Indian-corn 90 maunds; for tobacco and potatoes 180 maunds each, and for onions and melons, 120 maunds. These crops are the only ones for which manure is considered necessary.

Increase of the more valuable crops.

Mr. Guthrie, writing in 1807 regarding the Saháranpur district, which comprised the present districts of Meerut, Saháranpur, Muzaffarnagar and a part of Bulandshahr, says, "it is estimated that 22,000 bíghas are under sugar cane cultivation; thus this cultivation is already considerable, and that it is not increased to a far greater extent is solely owing to the indigence of the cultivators; nor does the cane which is now produced yield all the advantage of which it is capable, being for the most part made into *gúr* and exported to Jaipur and other trans-Jumna States; very little indeed is refined and manufactured into sugar. Indigo is not cultivated to any extent here." Cotton is spoken of in the same strain. A reference to the statistics given under "*Irrigation*" will show the enormous increase in the cultivation of these superior crops in canal-irrigated land; and in well-irrigated land the contrast is quite as striking. The cane that was most generally grown in 1807 is now everywhere considered the most inferior of all the four sorts cultivated in this district. The chief articles of produce in Mr. Guthrie's time were wheat, gram, rice and barley. These grains are

much more largely cultivated than formerly, while the decrease in inferior grain is very considerable. Another crop now largely cultivated is potatoes. Mr. Dumbleton, Collector, writing in 1809, says:—"I have not been able to prevail on any zamíndár to undertake the cultivation of potatoes in any of the parganahs of this district; never having seen the plant, and unacquainted entirely with its use, they have declined entering into a speculation the advantages of which are hitherto unknown in this part of the country. No seed potatoes are procurable at Meerut or at any place nearer than Fatehgarh." The increase of cotton and other cultivation has not been followed by a decrease of food grains, and the increase in non-cereal crops has been more than balanced by the increase in the cultivated area, extended irrigation, and higher farming.

Value of the stock-in-trade of a plough of land.

The amount of capital represented by the implements and cattle necessary for an average holding is about Rs. 200, but among these are included many instruments which are held in partnership. Exclusive of bullocks, which are very frequently hired at three annas a day, the implements and tools required to cultivate the amount of land a plough can till are worth from Rs. 15 to Rs. 20. The principal implements used in husbandry are (1) the *hal* or plough, which with its component parts cost about Rs. 3. These are the *halas* or beam; the *tindi* or *hatheli*, the handle or still; the *páthá* or *parotha*, which is generally at the end, shod with an iron share called *phálí*. The *hal* is the body of the plough, the main piece into which the *halas* and *páthá* are joined. The *wag*, called also *pachhar*, is a peg or wedge which fixes the *halas* firmly into the *hal*. The wedge which fixes in the *páthá* is called the *pachhila*. (See further, under Muzaffarnagar.)

Implements.

Sugar cane.

Ikh (or sugar cane) is sown in good soil and must have irrigation except in the *khádir*, where the natural moisture is sufficient. It is sown from Phálgun to the end of Chait, and is cut in Pús and Mágh. The ground requires 15 or 16 ploughings and about 25 maunds of manure per kuchcha bígha. The crop is injured by a worm called a *kanswa*, which usually, if at all, appears while the *ikh* is in its infancy. After the plant is affected by this worm it ceases to grow and gradually dries up. A second worm, known as *silái*, injures the crop just as it is ripening, and the result first appears in the wavy leaves at the top (*agaula*). Sometimes a stray branch springs out from the bottom (*karanjwa*) and destroys it both in the early period of its growth, and later on, when it is known as *kanas*. The growth of these sprouts may generally be prevented by tying ten or twelve canes together at a cost of about eight annas per kuchcha bígha. The cane, like the bambu, occasionally flowers, and then it is useless for pressing. The day after the *Diwáli* the first fruits of the cane are gathered and enjoyed at a feast. *Ráb* and *gúr* are the names of the first form that the cane-juice takes after

boiling. *Ráb* is the substance from which nearly all the preparations of sugar are manufactured: *gúr* is used as it stands by tobacconists, confectioners, and as a condiment by all classes. The difference in the preparation of the two substances is that *gúr* is boiled longer, so that on cooling it admits of being beaten up into round balls or *bhelís* weighing from two to five sers. The molasses that drains from the *ráb* by pressure and during the purifying process is called *shíra*, and the remaining produce when dried and purified is called *khánd* or dry sugar. This again when further refined becomes *misri*. Vinegar is also made from the juice *(ras)*, and the tops of the leaves are used as fodder for cattle. The canes reserved for next sowing are placed in an earthen vessel and stored, but sometimes ratooning (or the leaving of the roots of the cane in the ground until next season) is adopted. These roots are called *moda*.

Sugar cane requires three waterings, which are known as the *palewa*, *kora*, and *akhiri*. The *gúr* and *ráb* are in this district usually prepared by Kahárs or Musalmán Halwáis, and their wages are usually 2½ to 1½ sers per maund; but sometimes cash wages are given. The driver of the sugar-mill is called *pátiya*. The man who puts the chopped cane into the *kolhu* is called *periya*, the man who supplies the *periya* with the cane is called *muthiya*, and the man who chops up the cane is called *gandkat*. The refuse cane after pressing is called *khoi*, and the person who feeds the fire with the dried *khoi* during the boiling process is called *jhonka*. There are four kinds of sugar cane grown in this district: the *bareliya* from Bareilly, the *srenta*, the *dhaul*, and the *jálri*. The cane when first sprouting is called *pavi* or *poya*, when it begins to throw out little stems it is called *byánt*, and when the cane is one and a half feet high *ikh*. The produce of sugar cane is, *gúr*, per ser 16 pie; *shakr*, 2 annas; *chini*, 5 annas; *khánd*, 4½ annas; *shíra*, 6 pie; *misri*, 8 annas; *batása*, 7; *gindaura*, a large wafer of fine sugar distributed at marriages and funerals, 10 annas; *salúni* and *gáta*, 8 annas. There are many ceremonies connected with sugar cane cultivation in this district deserving of notice. The first of all is the *pawan parchha*, *i. e.*, seeing in which direction the wind blows. There are two methods of ascertaining this (1) by dropping dust from an eminence, and (2) by elevating a rag on a bambu rod. Until the wind is seen to be favourable the cane is not planted. The bringing out the plough and putting it into the ground to turn over the soil is called *halaita*. Brahmans are always present at the ceremony. (3) When the *ikh* or cane is planted the plough is worshipped with turmeric and rice. This ceremony is called *uhkar* or *okhar*. (4) On the eleventh of the light half of Kárttik (October) the first *ikh* is cut, and around the first bundle a red thread *(kaláwa)* is tied. After the ceremony the cane is distributed. (5) The *kolhu* (or sugar-press) is not planted in the earth till the purohit (or family priest) has declared the auspicious moment. (6) On the first day of pressing there is a ceremony called *raswái*, when the juice of

the sugarcane is passed around. (7) There is a feast when *gúr* is first cooked; some *gúr* is distributed and some set apart as an offering to the deity. This is called the *faríd*, from a certain Pír Farid Baksh, Shakarganj, a local saint. (8) The last *gúr* prepared is distributed at a feast called the *ikh barhi*.

Sugar crushing mills.

Experiments have recently been made at Bhola which may have an important influence on the future of sugarcane cultivation in canal-irrigated districts. A set of small horizontal rollers turned by a small over-shot wheel exerting about eight-horse power was erected at the falls, and succeeded in crushing a maund of cane in five minutes. According to Mr. Butt's calculations seven maunds of cane are pressed in the Shahjahánpur district in 4½ hours, or one maund in about 40 minutes; and in Meerut it takes 24 hours to fill one *kandi* with juice, which was filled by the rough and simple mill at Bhola in 32 minutes. The time, therefore, occupied by the water-mill as compared with the bullock mill is as one to eight, besides the great saving in cattle and manual labour. The Bhola experiment is not yet complete, but all classes are satisfied of the importance of the success already obtained with hastily constructed machinery of imperfect and inexpensive character. Taking the returns of 1874-75, the area under sugarcane irrigated by the canal amounted to 141,662 acres, which yields 7¼ million maunds, 260,000 tons of *gúr*, worth about 2¼ millions sterling annually. These figures alone show the great importance of the industry, and there can be no doubt that the application of water-power to crushing the cane must "have an important effect on the sugar trade of this part of the country by so lowering the cost of production as to enlarge the area of its movement." The release of labour must tend to higher and more careful cultivation and to a general improvement in the standard of cultivation. Experimental mills are about to be constructed at Bhola, Dásna, and Saláwa in this district, and at Chitaura in the Muzaffarnagar district.

Indian-corn.

The Indian-corn (*Zea mays*) crop is sown in Asárh, usually in *rausli* and *mattiyár* soil, and, as a rule, receives irrigation. After the ground has been ploughed, five or six times, the *maira*, or harrow sometimes called *henga*, is drawn over it. The seed is sown sparsely, one ser sufficing for a *kuchcha bígha*. In four months the crop is ripe. The stalk of the *makai* is called *pahra*; the ear is called *kukri*. If the crop is likely to be poor the *pahra* is given to cattle while green. When the grain has been beaten out, the empty ear is called *gúli* or *gúliya*: and is used as fuel for fire. If the stalk is sound, the ears are generally stored with it in a thatched pile, and will remain good for a long time. A very favourite food in the villages is a bread made of equal quantities of gram and *makai*. Another favourite dish is pounded *makai* boiled in milk and sweetened with sugar. This is called *daliya*. A worm called *silái* does much injury to the stalk of *makai*, especially when there has been a severe east wind (*púrwa*), but after the hair (*bál*), called *chanwar*, has once

appeared this worm is seldom seen. In *makai* flour there is no glutinous quality, so people do not knead it, but simply pour a little hot water on and bake it. The ears are frequently roasted by the people and eaten before the grain gets hard. These are called *bhúta* or *bhúnta*. The grain beaten out is usually termed "*nanha-náj.*" This crop is cut in Asauj. The average produce per acre is nine maunds. The cost of production is about Rs. 8, and the value per acre Rs. 12 or Rs. 13.

Joár.

Joár (*Sorghum vulgare*) is sown in Asárh and is grown in all sorts of land; only one ploughing is required. For grain the seed is sown sparsely: two and a half sers per kuchcha bígha. What is sown for *chari* or fodder is usually sown rather early and closely, sometimes in the beginning of Baisákh. The ear of *joár* is called *guphi* or *gupha*. *Joár* is baked and eaten in the same way as *makai*. While *joár* is young an insect called *bhaunra* or *bhaunri* injures the stem if there be a want of rain. This insect is as thin as thread, with a black head and earthy colored body. It is said that if cattle eat *chari* thus infected they soon suffer from severe pain and their bodies become inflated. There is no good remedy for it and the cattle usually die. Sometimes cow-dung ashes are given as a remedy in these cases, and more frequently a paste made of *joár* flour and sour butter-milk. These insects are innoxious to buffaloes only. They perish instantly the rain has fallen, and unless the ear has come out the crop is little injured. If the ear has sprouted before the rain comes the crop is destroyed and nearly valueless. The average produce per acre is from four and a half to five and a half maunds. The expenditure per acre is Rs. 5 or 6, and the value per acre is Rs. 12. From *joár* are made *roti*, *parmal*, and *khíl*. Any grain that on being parched (*khíl jata*) becomes inflated is in this district called *khíl*.

Bájra.

Bájra (*Penicillaria spicata*) is sown in Asárh and cut in Asauj. It is generally cultivated in *bhúr* and inferior *rausli* soil. The seed is sown sparsely: about a quarter of a ser per *kuchcha* bígha. The grain is of a heating or blood-giving character, and is chiefly eaten in the cold season. It is frequently used for fomentations for pains. The stalks are used as fodder. The average produce per acre is five maunds to six. The expenditure is about Rs. 3 and the value of the produce about Rs. 7. When the *bájra* stalk (*phatera*) begins to throw out shoots, the villagers say '*kainas phút ati*," and when the ear begins to show itself '*kahiba nazar ata.*" The fluffy flower of *bájra* is called *búr* and *búra*. From *bájra* grain are made *roti*, *khichri*, *andarsha* and *khíl*.

Urd.

Urd (*Phaseolus Roxburghii*) is sown in *rausli* or *bhúr* soil in Asárh, and is ripe by the end of Kúár or Asauj. Half a ser of seed is sown per *kuchcha* bígha. From the *púrwa* or east wind the stalk becomes afflicted by an insect which produces a disease in the upper

part of it, called *chhipwa*, so called because the leaves become parched up into a scroll and are lost to view nearly. Another name for *úrd* in common use is *másh*. A smaller grain, but very similar to *úrd*, is *úrdi*. A quarter of a ser of this is sown per *kuchcha* bígha. From *úrd dál* is made *sattu*, *dál*, *bari*, *bariyan*, *imrati*, *pera*, and at Hápur and Púth *pápar*.

Moth. *Moth* (*Phaseolus aconitifolius*) is sown in *bhúr* lands. It is sown in Sáwan and is ripe in Kárttik. The grain is of a warm character. Too much rain injures it, and artificial irrigation is rarely resorted to. It is usually sown in lines with *joár*. The average produce per acre is four and a half maunds. The expenditure is Rs. 6, and value per acre Rs. 13.

Gawár. *Gawár* (*Cyamopsis psoraloides*, *D. C.*) is sown in *dákar* soil, usually about the middle of Asárh, and is ripe by Asauj. While the bean is green it is eaten as a vegetable. When ripe it is given to animals only. The average produce per acre is ten maunds. The expenditure per acre is Rs. 7-8, and the value per acre about Rs. 9-8.

Cotton. *Bári* or cotton (*Gossypium herbaceum*) is sown in *mattiyár* and good *rausli*. The seed is laid sparsely, at one ser per *kuchcha* bígha, usually in land that last bore a sugar cane crop. It blossoms in the beginning of Asauj, and from Kárttik up to the middle of Púsp people pluck the pods. If while the cotton (*kapás*) is ripe in the pod (*gular*) any frost or cold of great intensity happens, the cotton is ruined and the seed (*binaula*) becomes black and moist. Manure is given to *bári*. After the cotton is plucked the stalks are cut off and the best are used for basket-making, the rest for roofing, matting to protect earthen walls during the rains, and fuel. The pods are plucked by women, who, if hired Chamárins, usually get one-eighth share for their work. The average produce per acre is three and a half maunds, and the expenditure per acre Rs. 8; the value is about Rs. 13. When the cotton plant shows the first leaf, in village parlance the season is "*dívala hoti*." The two next stages are generally known as *dopatti* and *chaupatti*. When the flower appears the plant is said to *puri lagna*, and more usually *bári lagna*. The pod is called *gular* or *dodi* or *doda*. The appearance of the pod is described by villagers as *taint ane lagta*. The next stage is the bursting of the pod, *kapás khílne lagta*. The cotton seeds are called *binaula*, and the cleaned cotton *rúi*. The cloths manufactured from cotton in the district are *garhi*, *malmal*, *dhotar*, *gazi*, *chárkhána*, *dosúti*, *dolara*, *kalín*, and *dari*.

Rice. *Dhán* (*Oryza sativa*) is also frequently called *sáthi* because it takes sixty days to grow. It is sown at the end of Asárh and cut early in Asauj. Three sers are sown per *kuchcha* bígha, and when the ground is well covered with water an implement called a *gahan* is drawn over the surface. This is a piece of (*takhta*) timber on which four pegs

(*khúnti*) are fixed. The ear remains concealed in the stalk until the latter is quite dry and threshed. This dry stalk is called in this district *purali* or *pavera*. This after being beaten out (*gahna*) is used for bedding and food for cattle. The rice is eaten in many ways; (1) as *chaula*, or rice moistened, then parched, then pounded; (2), *khíl*, rice moistened, then baked, is much eaten in Kárttik during the *Diwáli* festival. Hard rice which cannot be made into *khíl* is made into a coarse dish called *sattu* or *bhojiya*. A very similar food is *murmura*, which is inferior rice boiled, dried and subsequently parched. Rice is found an active medicine in the cure of diarrhœa arising from heat in the system. The cultivation of rice is small in this district, and is greater in the tahsíls of Ghaziabad and Bágpat than elsewhere. In the former tahsíl, in 1870, while the cultivation of wheat was nearly 42,000 acres, only 970 acres were devoted to the cultivation of rice. The produce is about 12 maunds to the acre: the expenditure per acre Rs. 9 and the average value about Rs. 15. *Munji* is similar to *dhán*, but smaller: it is largely grown in this district, and is much eaten by the well-to-do classes. The young *munji* is first grown in a sort of nursery and then transplanted. This crop takes longer to ripen than *dhán*. It also differs from it in appearance: *dhán* is blackish, while *munji* has a yellow tint. The ear of this too shows itself. The produce per acre is about ten maunds, and the value about Rs. 20. *Munji* is very largely grown in the Ganges *khádir*, especially in the southern portions included in the parganahs of Garhmuktesar and Púth.

Múng.

Múng (*Phaseolus mungo*) is very like *urd*. *Lobiya* (*Vigna sinensis*) is usually sown in lines with *joár*. It resembles *urd*, but is larger. When unripe it is eaten as a vegetable. When ripe the grain is moistened and eaten with salt. The consumption is small.

Til.

Til (*Sesamum Indicum*), called in Persia *kunjud*, is usually grown as a fence round crops of *joár*, *gawár*, *chari*, &c. The plant bears a flower, and the dew taken off the flower in the early morning is popularly supposed to be a panacea for all eye diseases. The plant bears an oily seed which produces what is generally known as sweet oil; this is eaten like *ghí* (or clarified butter) with food. A disease known as *chhipwa* injures this plant, producing a sort of blight which scrolls up the leaves. There is a proverb in frequent use:—"*tilon men tel nahin kahna*,"—"to say there is no oil in the seeds of sesamum," which is equivalent to our proverb, "to swear black is white." At the festival of *Sakat*, held in the month of Mágh, Hindús eat a composition of *gúr* (a preparation of sugar) and *til*, which they call *tilkut*. The stalk of the *til* is only used as fuel. *Til* is sown at the end of Asauj and is ripe about the beginning of Baisákh. The produce, sown in lines with *joár*, is about 25 sers; the expense of this sowing does not exceed one rupee, and the average price is 11 or 12 sers per rupee.

Kangni.

Kangni (*Setaria Italica*). This crop is sown about the end of Asárh and is cut early in Asauj. It is usually cultivated in lines with *chari*, *gawár*, *urd*, &c. The grain, a species of millet, is very small and of a hot character: it is popularly supposed to alleviate the pains attending on child-birth. The ear is very like the tail of the little squirrel called *galeri* (*Sciurus palmarum*). *Manduwá* (*Eleusine corocana*) is a very inferior grain, and is only eaten by the poorest classes. The average produce per acre is 14 maunds, the expenditure on which is Rs. 7, and the value of the crops is Rs. 14. *Chauldi*, a species of vegetable (*Amaranthus Gangeticus*), of which large quantities are found growing wild, is little cultivated. *Sawán* (*Oplismenus frumentaceus*) is like *kangni* and is grown in *dákar* land: it is little cultivated. It is said that this grain has seven distinct husks (*parat*). It is a species of millet and grows very rapidly, the time between its being sown and cut being only six weeks; it is grown chiefly for the sake of fodder. *Sánwak* (*Oplismenus colonus*). This grass, which grows wild, produces a grain which is collected by Kahárs. These people water it themselves, and after gathering it beat the grain out with a rough flail. *Pusái* or *pansái* is a kind of rice which grows wild in jhíls. Kahárs collect it as they do *sánwak*. The grain is largely eaten by Hindús on their fast days. *Thor* or *thuhur* (*Cajanus Indicus*, *Var.*) is a species of pulse; the crop is sown as a fencing round sugarcane fields, and is very like *arhar*.

Sani.

Sani (*Crotolaria juncea*) is sown in *bhúr* land and ripens in three months or less. The seed is extracted and given to cattle, and the stalk is steeped in water; when sufficiently moistened the bark is taken off and woven into ropes and coarse matting (*tát*, more generally called gunny).

San.

San (*Hibiscus cannabinus*) is sown in Chait and cut in Kárttik; it is grown usually with cotton in lines, and oftener still as a fence round it. It bears a beautiful white flower; the fruit which succeeds it, called *gúlra* and *sankúkra*, is eaten as a vegetable. Ropes and *tát* are made from the bark as from *sani*, the ligneous portion of the stalk from which the bark or fibrous portion has been stripped is used as fuel, and matches are made by splitting it into thin slips and tipping them with a preparation of sulphur. The produce of the bark, a coarse hemp, is about 20 sers the acre the expenditure is not above one rupee, and the market value of the hemp is on an average ten sers for the rupee.

Rabi crops. Wheat.

Wheat (*Triticum vulgare*; *gehún*).—This crop is sown in all sorts of land; ten sers of seed per *kuchcha* bígha are sown seven ploughings are requisite, the first about the end of Asárh or early in Sáwan. The *maira* (*henga*) is put over the land in all four times, once after every other ploughing. About three days after the wheat has been sown

kiyárís are made, *i. e.*, the field is divided off into several beds, each surrounded by a small low mound of earth. Along these mounds *sarson* (*B. campestris*) is sown. In Aghan (*Margasir*) water must be given. A little red worm called *kukhí*, afflicts this crop in the ear, especially when the east winds are constant. In Phálgun too injury is frequently caused by the coming on of the west winds, then the crop becomes blackish and blighted; smitten, as the English farmers say, with 'smut.' The villagers say of this that the crop is "*jhola ne mára.*" When the wheat is stored, two insects find their way into the *kháti* (where the corn-dealer stores his grain): (1) the *súra*, a black fine beetle which causes no damage and is venerated by Baniyas; (2) the *súrsári*, a tiny black insect which causes great injury to the grain. A good fencing of straw on the sides of the *kháti* is said to keep off this insect. Wheat is cut in Baisákh. The average produce per acre is eight maunds, the expenditure is about Rs. 10 or Rs. 11, the value about Rs. 18. The cultivation of wheat in this district is very extensive.

The following terms are used by villagers in relation to the cultivation of wheat and barley:—(1) when the wheat or barley first shoots from the ground it is said "*súi nazar ane lagti*" and "*níl dikhái deta*" and "*jins pasar aya*"; (2) when the blade throws out shoots "*tikra ane lagta*" and "*jins tatar aya*"; (3) when the crop can be cut for fodder it is called *khavid*; (4) when the ear begins to form, "*kábha*" or "*koth ane lagta*"; (5) the hair on the ear of the corn is called *púr*; (6) when the grain is being formed, but is still unripe, "*dúdh par jata*" and "*jins gadar aya*"; (7) when the grain hardens "*gola ho játa*;" (8) and when dry *gandum* and *jau*. The grain of wheat is called *gaddi*.

Preparations from wheat and barley.

The preparations from wheat are *roti*, *kachauri*, *púri*, *pasauntha*, *nán khatái*, *jalebi*, *balusáhi*, *súji*, *mathri*, *suháli*, *shakrpára*, *chauri*, *gúnjha*, *ghewar*, *khajla*, *pahái*, *guldána*, *sinwai*, *halwa*, *magad*, *mata*, *khajúr*, *sattu*, *barfi*, *khurma*, *laddu* and *pheni*, which differ in price from nine pies to ten annas per ser of two pounds. The preparations from barley are *roti*, *sattu*, *dána ardáwa* and *laddu*, which vary in price from six pies to one anna per ser. A festival is held on the threshing-floor as soon as a small pile (*rás*) of corn has been cleaned and winnowed. This corn is surrounded by a circuit of cow-dung, and as soon as the purohit has finished his incantations, three lots of corn are taken from the little pile and placed in three different places:—one for the purohit, the second for the Devi or local goddess, and the third for Bhagwán, or the god of the universe. After another incantation the purohit takes his share, while the Devi's share is given to a Brahman jogi, and Bhagwán's share to some fakír. The ceremony is called *siyáwarh*.

Barley.

The cultivation of barley (*Hordeum hexastichon*) or *jau* resembles wheat. There are two species of barley grown in this district—(1) that which has the prickly hairs (*tus*) on the ear; (2) that in which they are

absent. The crop is sown rather later than wheat and reaped a little earlier. The grain is mostly eaten by the poorer classes. During the festival of the *Holi* the ears are roasted by Hindús, and on meeting they exchange parched barley in token of friendship. Hence the term *holi* (because, *jau ka hola*, or parched barley) is thus distributed. A medicine composed of water strained off from the ashes of burnt barley ears and stalks with a little butter-milk is much used as a cure for indigestion. The name given to the compound is *jawakhar*. The average produce per acre is from eight and a half to ten maunds, the expenditure about Rs. 10, and the value per acre about Rs. 18. Gram or *channa* (*Cicer arietinum*) is usually sown in *dákar* land about the end of Asauj, and is gathered in the beginning of Baisákh. Four sers of seed per *kuchcha* bígha are sown. Neither the *maira* or *lakar* are put over ground sown with *channa*. The tops of the young plants are eaten as a vegetable. When ripe, *channa* is eaten either parched or split as a *dál*. The grain is largely consumed by horses. An insect called *súnri* occasionally injures growing *channa*. When *channa* is in the *kháti* an insect called *dhora* frequently causes damage. To ward off these the people cover the *channa* with sand. The average produce is about eight maunds an acre, the expenses are Rs. 4, and at 20 sers the rupee the value would be Rs. 16. Before the flower appears in *channa* the green leaves are called *ság*. When nearly ripe, as used during the *Holi* festival, the grain is called *búnt*. From *channa* are made *dál*, *seo*, *laddu*, *nakhúdi*, *pakori*, *misi chilári* or *chilli*, *kadhi guldána*, and *chaubena*.

Gram.

Pias (*Pisum sativum*) are sown at the end of Asauj and gathered in the latter part of Baisákh. The cultivation is very similar to that of *channa*. The average produce per acre is six maunds. The expense is little, and the value per acre about Rs. 10. This crop is frequently sown in lines with wheat and other *rabi* crops. *Kúsum* or safflower (*Carthamus tinctorius*) is usually sown with *channa*. It produces a flower with which clothes are dyed red. An insect called *ál* occasionally injures this crop. Great damage is occasioned by lightning if the crop be in flower. The *kúsum* of Ganeshpur in this district is much celebrated. *Kúsum* is sown at the end of Asauj and gathered early in Baisákh. The average produce per acre is 10 sers. The expenditure is about Rs. 2½ per acre, and the value at two sers the rupee about Rs. 5. *Torya*, a species of mustard, is very similar to *sarson*, and is little grown in this district. When cultivated at all it is usually found in lines with *úrd* The oil extracted is used for lighting purposes. *Sarson* (*B. Campestris*) is usually sown with wheat and barley and has a yellow flower. When young the green leaves are eaten as a vegetable. The *sarson* oil is known as *karwa tel*. The seed is sown in Kárttik and the plants are ready in Baisákh. The average produce per acre is one maund ten sers. The expenditure is about one

Peas.

Safflower.

rupee and the market rate is usually about 18 sers the rupee. Another oil plant is *tárá* (*S. eruca?*), which, like *sarson*, is largely grown with wheat and barley in this district.

Arhar. *Arhar* (*Cajanus Indicus*) is in some parts called *túar*. It is sown with *joár*, *chari* and *makai* about Asárh, and is ripe in Jeth, thus remaining eleven months in the field; the grain is made into *dál*, *i. e.*, husked and split. *Arhar* is grown in large quantities in this district. *Chaina* or *chena* (*Panicum miliaceum*) is a species of millet sown in Chait or Baisákh, and ripe in Jeth or Asárh. It is little eaten except among the poorer classes, and its cultivation is not extensive. *Jai* or oats (*Avena sativa*) is usually sown with wheat and barley as fodder for horses. The cultivation is small.

Tobacco. The young plants of *tambáku* or tobacco (*Nicotiana tambacum*) are reared in a sort of nursery until they become strong, when they are transplanted and grown in *bára* land, *i. e.*, land near a town or large village. When half grown the upper leaves of the plant are torn off: this causes the essence or sap of the plant to settle in the lower leaves, which thus become large and thick. After the tobacco has been cut it lies for some days in the field, after which it is piled up and bound up into bundles. The leaves are afterwards plucked off, and the *dhanthla* (or bare stalks) are burned. Two species of this plant are grown in this district, *viz.*, *desi* and *Kalkaliya*, the latter of which is drier. Tobacco ashes are frequently used as a cure for flesh wounds on cattle. The average produce of an acre is eight maunds: the expenditure about Rs. 10, and the value of the crop Rs. 20.

Melons. *Melons* (*Curcurbita melo*, or musk melon, and *C. cirtullus*, or water melon) are grown largely on the banks of the Jumna, and to a less extent on the banks of the Ganges and Hindan rivers. They are sown in Phálgun or Chait, and are ripe during the hottest part of the summer. The average produce of an acre is from fifteen to twenty maunds. The expenditure is about Rs. 10, and the market rate on an average sixteen sers the rupee.

Indigo. *Indigo* (*Indigofera tinctoria*) is sown, one ser of seed to the bígha, in Chait, Baisákh and Jeth; it is cut in Sáwan, Bhádon and the early part of Asauj. A severe rainy season causes immense damage. The average produce per acre is from 35 maunds to 40 of the green plant: the expenditure is about Rs. 5 per acre, and the ordinary rate is four to five maunds of the green plant per rupee. *Mirich* or chillis (*Capsicum frutescens*) *pudina* or mint (*Mentha sativa*), *dhaniya* or coriander seed (*coriandrum sativum*) and *khira* or cucumber (*Cucumis sativus*) are sown about the same time. *Piyáj* or onions (*Allium cepa*) and *lahsan* or garlic (*Allium sativum*), are sown in Asauj or early in Kárttik. *Chahora*, a sort of rice which grows extensively in the Bágpat

Garden vegetables.

tahsíl, (yearly about 5,500 acres), is sown in Asárh and the crop is cut in Asauj. *Masína* is a name applied to linseed (*tisi* or *alsi*) in the Bágpat tahsíl, the only part of this district in which it is grown. The yearly area is about 1,300 acres. *Paunda* is a very large species of sugar cane. It is little grown, though sometimes to be found in Bágpat and in the immediate neighbourhood of Meerut. Singhára *(Trapa bispinosa)* or water-caltrop is little grown in this district. *Shalgam*, turnips *(Brassica rapa)* are as yet little cultivated, but yearly increasing. *Gájar (zardak)* or carrots are becoming more extensively cultivated year by year. In 1870 there were 250 acres of this vegetable cultivated in the Bágpat tahsíl. *Káhpús* is a sort of rice very like *munji*. It is nowhere grown but near Baraut, and there in very small quantity. *Saunf* or aniseed *(Pimpinella anisum)* is very little cultivated, only about four acres in the entire district. *Gochni* (wheat and *channa* sown together) is somewhat extensively cultivated: nearly 2,000 acres are anually grown in the Bágpat and Kutána parganahs. *Methi*, the plant fenugreek, *(Trigonella fenugræcum)* is little cultivated. *Masúr* or lentils *(Ervum lens)* is not much cultivated. In 1873, about 33 acres of it were grown in tahsíl Bágpat: this crop is also called *'adas*, and is the reputed source of the *Revalenta Arabica*. The average produce per acre is four and a half maunds. The expenditure per acre is Rs. 3 and the value about Rs. 6. *Ajwáin (Ptychotis ajwáin)*.—This is a species of aniseed, but it is little grown. Of *gulguláb* (rose) a few acres are found in tahsíl Bágpat. *Ker* is an oil plant with small white leaves: it is very little grown. *Bejhar*, a mixed crop of barley, wheat and occasionally oats, is frequently sown in the duáb of the Hindan and the Jumna. The pulse *khisuri* or *kesari (Lathyrus sativus)* is not grown in this district. The pumpkin named *kaddu* is grown in some places, but in no great quantities. *Kachra* and *kachri* are grown in considerable quantities. *Tori*, a species of vegetable marrow, is largely cultivated in the neighbourhood of large villages and towns. The *karela (Momordica charantia)* is cultivated to a small extent in the same localities. Potatoes are largely grown in the neighbourhood of Meerut and Hápur, usually from what is called the Naini Tál seed. There are three months in which potatoes are sown,—Kárttik, Bhádon, and Asauj, and they are drawn in the corresponding months of Baisákh, Mangasir, and Phálgun. The average produce per acre is from 120 to 150 maunds. The expense amounts to about Rs. 100 or Rs. 120; the value is about Rs. 180. The *kachálu* and the *alu shakarkand* (or sweet potatoe) are only grown in gardens. *Rend* or castor-oil plants are seldom seen, and no oil is extracted from them in this district. No grasses are extensively grown as fodder. *Bathúa* is found in considerable quantities. Lucerne has till lately been cultivated by Europeans only. Here and there fields of it are to be seen in the district, and its excellence is fully appreciated by the zamíndárs who have grown it. It has come into extensive use towards

Masúr.

Ghaziabad. Dúb grass *(Agrostis linearis)* is to be found everywhere. It is this species that is usually collected by grass-cutters for the horses of Europeans.

Fruit-trees.

The fruit-trees cultivated in the upper Duáb and the wild products of which use is made by the inhabitants in times of scarcity may be briefly described here. The mango or *ám* is common everywhere. The *Aurantiaceæ* or citron-worts are numerous. Amongst them is the *Ægle marmelos (bel, sriphal*, H.), the fruit of which, either made up into a syrup or taken raw, is considered a specific in cases of dysentery. The rind of the *bel* is made into snuff-boxes and salt-cellars. The wood is fit only for burning. The *Citrus aurantium*, Linn. (orange, Eng.; *nárangi* H.), is largely cultivated in groves especially near towns by the gardener caste. The *Citrus Bergamia* (lime, Eng.; *nelú*, H.), the *Citrus limonum* (lemon Eng.; *bará nebú*, H.) and; the *Citrus medica*, (citron, Eng.; *taranj*, H.) are all cultivated throughout these Provinces. The small variety of lime known as the *kághazi nebú* is highly esteemed; it flourishes especially in Jaunpur and Azamgarh, and is much used in the manufacture of sherbets. The *mítha nebú* or sweet lime is eaten. These trees flower in Mágh and Phálgun, and the fruit is ripe in Kuár (September-October.)

There are three well-known varieties of the orange: the *sangtara, nárangí*, and *kaunla;* the last is the smallest and most highly prized. *Nephelium litchi, (líchi*, H. and Eng.) has been introduced from China and is now sometimes cultivated in European gardens. The fruit is ripe in June. The *Eriobotrys Japanica (lokwát*, H. and Eng.) flourishes in great perfection. There are two varieties: the *surkh*, of a deep apricot colour, and the *safed*, of a light primrose colour. The trees flower in Aghan (November-December) and the fruit ripens in March-April. The guava (*Psidium pomiferum*), *amrúd*, H., is one of the commonest orchard trees. It blossoms in Chait (March), and the fruit is ripe in Sáwan. There are three varieties: the common pale yellow, the *gulábi* or pink, and the *safed* or pear guava. Of pummelows *(Citrus decumana)* the two varieties known as *chakotra* and *sátla phal* are commonly cultivated. The *Spondias mangifera;* hog plum, Eng. (*amra*, H.,) is occasionally cultivated; the fruit ripens in Sáwan. Besides this there are three varieties of the common plum *(Prunus domestica)* grown and known as the *alúchá*, (yellow variety) *álú bukhára* (purple), and *bihi* (red). The *alúchá* flowers in Mágh (January) and ripens in Jeth (May). At the same time the peach *(Persica vulgaris)* comes to perfection; the varieties best known are the round peach (*árú*) and the *chakaiya* or China peach. The apple (*seo*, H.) has two representatives in the plains: the *desi seo* or country apple and the *wiláyati seo* or imported apple. Both are worthless as fruit; they ripen in Baisákh (April). The pomegranate (*Punica granatum*) *anár*, H., is commonly grown near villages and towns. It is naturalised in places; flowers in Phálgun, and matures its fruit in Sáwan (July-August).

There are three common varieties: the flowering pomegranate (white and pink), the *mítha* (sweet), and the *khatta* (sour).

Irrigation.

The influence of the introduction of the canal system on agriculture will now be noticed. Throughout the whole district irrigation is extensively practised from canals, wells, and tanks. From the following table, comparing the state of irrigation at the past and present settlements, it will be seen that the irrigated area has risen from 232,869 acres to 577,291 acres, and though these figures must be received with caution, yet the fact of a very large increase in the irrigated area cannot be doubted. The increase in cultivation and the decrease in the area returned as barren and unculturable must be set down as partly due to the same cause:—

Parganah.		Barren and free of revenue.	Culturable.	Cultivated.	Irrigated.	Unirrigated.	Percentage of increase in cultivated area.	Percentage of increase in irrigated area.	Total area.
1. Meerut ...	E.,	39,689	45,443	150,021	42,482	107,539	...	...	235,153
	F.,	42,182	26,975	166,373	99,974	66,399	10·8	135·3	234,530
2. Hápur ...	E.,	12,283	21,559	65,235	19,261	45,974	...	...	99,077
	F.,	13,750	12,548	77,823	39,878	37,945	19·2	107·0	104,121
3. Saráwa ...	E.,	7,509	11,035	29,823	9,766	20,057	...	...	48,367
	F.,	4,990	7,756	36,114	16,728	19,386	21·09	71·3	48,860
4. Garhmuktesar,	E.,	9,068	19,739	29,583	3,823	25,760	...	...	58,390
	F.,	10,526	12,529	44,267	10,919	33,348	49·2	188·4	67,322
5. Púth ...	E.,	6,626	9,646	20,831	2,043	18,788	...	...	37,103
	F.,	8,350	8,853	24,079	4,946	19,133	15·5	142·0	41,282
6. Dásna ...	E.,	12,183	26,537	47,943	26,454	21,489	...	..	86,663
	F.,	10,675	15,241	61,932	46,174	15,758	29·1	74·8	87,848
7. Jalálabad ...	E.,	17,884	25,348	83,394	26,156	57,238	...	...	126,626
	F.,	18,408	18,166	92,189	66,530	25,659	10·5	154·3	128,763
8. Loni ...	E.,	21,469	22,447	52,229	6,766	45,463	...	...	96,145
	F.,	16,004	21,919	61,879	22,935	38,944	18·4	238·9	99,802
9. Bágpat ...	E.,	26,511	15,434	79,952	14,167	65,785	...	...	121,897
	F.,	12,890	12,870	98,369	59,064	39,305	23·0	317·6	124,129
10. Baraut ...	E.,	8,170	7,195	33,880	14,905	18,475	...	...	48,745
	F.,	4,833	4,176	39,745	35,329	4,416	18·7	137·0	48,754
11. Kutána ...	E.,	8,996	11,376	26,718	9,319	17,399	...	...	47,090
	F.,	5,342	5 893	35,943	27,408	8,535	34 5	194·1	47,178
12. Chhaprauli	E.,	4,853	6,726	24,912	8,194	16,718	...	...	36,491
	F.,	3,738	4,767	28,924	27,439	1,485	16 0	234·8	37,429
13. Sardhana ...	E.,	16,767	19,532	51,357	18,443	32,914	...	...	87,656
	F.,	12,883	8,688	66,360	41,389	24,971	29·2	124·4	87,931
14. Barnáwa ...	E.,	18,140	15,115	38,262	11,047	27,215	...	...	71,517
	F.,	14,879	7,617	50,258	26,336	23,922	31·4	138·2	72,754
15. Kithor ...	E.,	4,940	27,399	61,535	11,248	50,287	...	...	97,770
	F.,	19,299	24,368	81,200	23,234	57,966	31·8	106·0	130,971
16. Hastinápur	E.,	14,469	33,788	60,704	8,795	51,909	...	...	108,961
	F.,	22,648	53,442	78,060	29,008	49,052	22·3	230·9	154,150
Total ...	E.,	233,453	318,319	855,879	232,869	623,010	...	...	1,407,651
	F.,	217,501	244,808	1,043,515	577,291	466,224	21·9	147·9	1,505,824

In the above table the area is given in British standard acres. 'E.' refers to the figures of the settlement under Regulation IX. of 1833, made by Sir H. M.

Elliot, and 'F.' to the recent settlement effected by Mr. Forbes, C.B. The figures in both statements are taken from the settlement records as affording more accurate and trustworthy data than any perfunctory inquiry at any other time.

Eastern Jumna canal.

Mr. Guthrie, in 1807, represents that irrigation was then very scanty, and that from the beginning of Aurangzeb's reign cultivation was more and more backward. At the time of Sir H. M. Elliot's assessment the Ganges canal had not been even surveyed and the full benefits of the Eastern Jumna canal had not yet been felt. The increase in irrigation in parganahs Chhaprauli, Baraut, Barnáwa, Bágpat, and Loni watered by this canal has been very marked. The growth of sugar-cane and the better crops has followed the introduction of the canal, and even at the last settlements during the few years it had been in operation its success had been such that it had "caused all the waste land in the neighbourhood to be brought under cultivation." This, too, when Chhaprauli, now, perhaps, the most fertile and highly cultivated parganah in these Provinces, was almost a desert at the British occupation. Wherever this canal runs it is highly appreciated by the villagers, and none of the evil effects which are said to accrue from the use of the Ganges canal are ascribed to its water, with the exception of those arising from the over-saturation of the soil, and which are, in a measure, avoidable by the cultivators themselves. Taking the principal crops for five years, the following statement shows the areas irrigated from this canal in each year by measurement (M.) and by contract (C.): as a rule, the contract system is preferred by the cultivators as more profitable for them :—

Crops.	1868-69.		1869-70.		1870-71.		1871-72.		1872-73.
	M.	C.	M.	C.	M.	C.	M.	C.	M.
Gardens, ...	606	462	871	296	1,030	4	987	...	978
Sugar-cane, ...	9,503	7,340	7,333	5,728	13,110	96	14,297	98	14,202
Rice, ...	825	1,739	4,132	2,895	6,707	19	5,077	16	5,777
Wheat, ...	27,729	21,920	41,506	1,231	43,376	255	42,926	...	36,602
Barley, ...	491	415	1,598	42	1,385	23	1,429	...	1,055
Maize, ...	23,883	3,168	3,616	3,133	3,574	14	3,538	...	1,979
Other cereals, ...	1,614	1,664	691	342	462	2	201	...	2,078
Pulses, ...	2,881	1,937	6,876	381	4,905	61	4,596	...	3,156
Fodder, ...	582	187	3,064	1,726	2,368	6	...	...	416
Fibres, ...	2,418	2,517	4,803	4,173	6,431	10	3,863	...	4,140
Dyes, ...	183	...	147	...	188	70	205	63	802
Drugs, ...	...	...	24	4	46	...	43	...	23
Oil-seeds, ...	5	3	6	...	10	...	18	...	348

The following statement shows the irrigation in each parganah from the Eastern Jumna Canal :—

Year.	Chhaprauli.	Baraut.	Kutána.	Barnáwa.	Loni.	Bágpat.	Total.
1866-67—							
Kharif, ...	5,390	8,287	4,864	1,246	1,510	8,324	29,621
Rabi, ...	11,040	15,640	9,167	2,658	3,220	15,883	57,608
Total, ...	16,430	23,927	14,031	3,904	4,730	24,207	87,229
1867-68—							
Kharif, ...	4,613	6,183	4,403	923	1,531	7,226	24,879
Rabi, ...	5,994	9,690	6,820	2,000	3,239	14,353	41,996
Total, ...	10,607	15,873	11 223	,2923	4,770	21,579	66,875
1868-69—							
Kharif,... ...	6,453	10,498	5,563	1,513	1,718	10,826	36,571
Rabi, ...	10,753	16,559	7,521	2,348	3,625	16,413	57,219
Total, ...	17,206	27,057	13,084	3,861	5,343	27,239	93,790
1869-70—							
Kharif,... ...	7,972	11,823	6,016	1,6?9	2,394	11,989	41,873
Rabi, ...	9,556	14,661	7 432	2,108	3,604	15,019	52,280
Total, ...	17,528	26,384	13,448	3,787	5,998	27,008	94,153
1870-71—							
Kharif, ...	6,744	8,399	4,880	1,179	2,248	9,317	32,767
Rabi, ...	9,408	13,458	7,182	2,123	3,539	15,119	50,829
Total, ...	16,152	21,857	12,062	3,302	5,787	24,436	83,596
1871-72—							
Kharif, ...	4,873	7,304	4,254	1,127	1,521	8,992	28,071
Rabi, ...	10,778	13,070	6,992	2 051	4,026	15,594	52,511
Total, ...	15,651	20,374	11,246	3,178	5,547	24,586	80,582
1872-73—							
Kharif,... ...	5,760	7,969	4,859	939	1,273	7,272	28,072
Rabi, ...	7,810	10,161	6,704	1,706	3,416	13,936	43,733
Total, ...	13,570	18,130	11,563	2,645	4,689	21,208	71,805

In 1861-62 the irrigation from the same canal amounted to 78,192 acres, and in 1863-64 to 71,248 acres.

Ganges canal.

The original Ganges canal system consisted of continuous main *rajbahas* parallel to and at some distance from the Duáb watershed, but this was discarded owing to the obstruction caused to the drainage line at several points. The main *rajbahas* are now being gradually cut through at the drainage lines wherever practicable, and irrigation is extended by minor water-channels, called *guls*, carried along the watershed of the minor duábs. The whole system is thus being slowly converted into one of *rajbahas* starting from the main channel, or from favourable points in the old main *rajbahas*, and running along the ridges of the minor duábs. This is especially the case in the upper portions of the Ganges canal. In carrying out these alterations and in the extension of irrigation several new channels and *rajbahas* have been constructed during the last ten years. The irrigation revenue of the Ganges canal is based on charges regulated by the area of land irrigated and the crops standing on that land. On the principle that various crops require water in various quantities from their occupying the land for a greater or less time, all possible crops have been divided into four classes, with a fixed tarif per acre for land irrigated in each class. The system adopted on the

Eastern Jumna canal is one of a simple fixed charge on each *kuldba* or water outlet from the distributary channel. On the Ganges canal the surveyors note from the village maps and the field registers the distinguishing numbers of each field and the crops it bears. The water bailiffs (chaukidárs) have small areas assigned to them, in which they must know every field irrigated, and point out such fields to the surveyor. The ziladárs, one to each canal subdivision on the canal, collect and complete the reports of the surveyors, and calculating the charges thereon, submit the same to the Executive Engineer, who collects the revenue, village by village, through the collectors of the district. The village patwári or accountant assists the lambardár or person engaging for the land-revenue on behalf of the village community, and who receives two per cent. on the irrigation assessment of his village for his trouble. The Ganges canal was opened in 1855, three years after the cutting in these parts had been completed, but up to 1861 there are no returns of irrigation that can be relied upon. The main Ganges canal irrigates parganahs Sardhana, Meerut, Jalálabad, Dásna, and portions of Loni and Hápur, and the Anúpshahr branch irrigates Hastinápur, Kithor, Saráwa, Púth, Garhmuktesar, and the east of Hápur.

The following statement gives the irrigation per parganah for seven years:—

Year.	*Parganah.*											
	Sardhana.	Meerut.	Hápur.	Dásna.	Jalálabad.	Loni.	Hastinápur.	Kithor.	Garhmuktesar.	Púth.	Saráwa.	Total.
1866-67—												
Kharíf, ...	6,052	11,774	1,187	6,138	7,047	...	3,437	1,953	980	218	...	38,786
Rabi, ...	9,222	19,613	2,629	13,460	20,270	50	6,246	5,790	2,974	664	...	80,918
Total, ...	15,274	31,387	3,816	19,598	27,317	50	9,683	7,743	3,954	882	...	1,19,704
1866-68—												
Kharíf, ...	5,864	9,718	930	4,293	5,153	...	3,956	2,372	1,140	280	...	33,706
Rabi, ...	5,899	12,924	1,960	6,967	15,340	122	2,588	2,722	1,763	241	249	50,755
Total, ...	11,763	22,642	2,890	11,260	20,493	122	6,524	5,094	2,903	521	249	84,461
1868-69—												
Kharíf, ...	8,504	20,318	1,672	10,348	15,301	1	5,252	4,529	3,242	982	192	70,341
Rabi, ...	17,532	35,608	2,819	23,299	33,284	61	13,547	9,543	7,158	4,147	488	1,47,4 6
Total, ...	26,036	55,926	4,491	33,647	48,555	62	18,799	14,072	10,400	5,129	680	2,17,827
1869-70—												
Kharíf, ...	7,925	17,015	1,922	13,049	17,117	37	5 326	4,152	8 897	1,543	180	77,163
Rabi, ...	10,470	22,406	2,545	16,217	24,335	199	4,622	5,147	3,371	1,986	381	91,679
Total, ...	18,395	39,421	4,467	29,266	41,452	236	9,948	9,299	12,268	3,529	561	1,68,842
1870-71—												
Kharíf, ...	6,601	13,377	1,232	7,878	9,962	9	5,102	4,203	2,735	939	174	52,212
Rabi, ...	11,186	25,083	2,486	18 354	26,626	11	6,613	7,820	3,931	2,709	471	1,05,297
Total, ...	17,787	38,460	3,718	26,232	36,588	20	11,715	12,023	6,666	3,648	652	1,57,509
1871-72—												
Kharíf, ...	5,950	10,915	1,034	7,130	8,586	...	4,408	2,878	1,877	880	105	43,793
Rabi, ...	6,493	15,663	2,109	12,125	17,380	...	4 101	5,341	3,631	2,179	294	69,315
Total, ...	12,443	26,608	3,143	19 255	25,966	...	8,509	8,219	5,508	3 ,059	399	1,13,1 9
1872-73—												
Kharíf, ...	5,892	9,976	1,118	6,951	6,445	...	4,115	2,914	1 986	887	138	40,422
Rabi, ...	7,945	13,841	2,379	13,262	13,218	6	4,299	5,214	3,363	2,392	332	66,251
Total, ...	13,837	23,817	3,497	20,213	19,663	6	8,414	8,128	5,349	3,279	470	1,06,673

Since the introduction of the canal, sugar cane cultivation has increased more than that of any other crop. The cultivation has more than doubled in the last few years. The following statement shows the area[1] under the principal crops watered by the Ganges Canal for four years: —

Crops.	1869-70.	1870-71.	1871-72.	1872-73.
Gardens, ...	1,925	1,641	1,245	1,379
Sugarcane, ...	27,320	34,011	28,045	25,807
Wheat, ...	67,822	85,554	49,186	53,363
Barley, ...	7,935	8,789	4,198	5,732
Rice, ...	8,045	4,777	4,560	4,651
Maize, ...	101,462	4.6	153	161
Other cereals. ...	6,912	3,667	1,441	1,561
Gram, ...	8 376	4,345	1,904	3,546
Other pulses, ...	6,238	4,154	2,207	185
Fodder, ...	1 894	272	685	611
Cotton, ...	10,616	4,3:3	3,904	2,133
Other fibres, ...	138	1,188	555	60
Indigo, ...	5,341	4,167	4,998	5,765
Other dyes, ...	82	115	7	323
Drugs, —	52	48	14	30
Oil-seeds, ...	...	...	7	3

The cultivation, too, of other crops has increased, especially of cotton, indigo, and wheat. Hitherto little damage has been caused by the efflorescence of *reh*, and probably there is now little danger of any further injury. In some places

[1] It will be interesting to note here the statement of sugar cultivation given by Mr. Colin Shakespear in October, 1818 :—

Parganah.	1809.		1816.	
	Bighas.	*Acres.*	*Bighas.*	*Acres.*
Dásna, ...	382	240	638	399
Bágpat, ...	1,844	1,150	2,670	1,669
Hápur, ...	1,828	1,140	2,259	1,446
Meerut, ...	6,799	4,218	9,206	5,754
Total ...	10,853	6,748	14,773	9,268

where the land is low-lying and in the immediate vicinity of the canal or its *rajbahas* percolation has rendered the ground sodden, and whenever the moisture in some measure subsides *reh* appears, but in no great quantities, and it is usually found that manure counteracts its evil effects. In some few places the ground has been rendered nearly useless by excessive percolation: these spots are usually found immediately under the canal banks where a depression in the line of country has placed the course of the canal at a high elevation above the surrounding country. Occasionally, in the best land watered by the canal, *reh* appears, but now, owing to judicious arrangements respecting the supply of water, its appearance is more rare than formerly, for the zamíndárs themselves admit that it is not the water itself but its being given in excess that produces *reh*, and this view is doubtless correct, for wherever land is being constantly moistened *reh* will be found as in the low-lying *khádir* lands of the Hindan.

Irrigation requirements.

A very small portion of the district is now insufficiently watered. The cliffs above the rivers and the tract of undulating sand above the Ganges are, however, scantily irrigated, and as the soil in such tracts is of the poorest description, cultivation is very precarious and distress in dry years very great. Mr. Forbes anxiously calls attention to this subject. It is questionable, indeed, whether the indiscriminate introduction of canal-irrigation, even if it were feasible, would at once raise the character of such tracts. To flood a poor unpopulated tract with a sudden flush of water is more likely to exhaust its already sterile soil than to increase its productive powers. But gradual extension of irrigation cannot fail to be of the greatest benefit even to the poorest soil, and there is little doubt that Mr. Forbes' suggestion of *takkávi* advances for the construction of pukka wells in Garhmuktesar may be applied with advantage both in this and other districts to all the sandy tracts along the banks of the Ganges which lie beyond easy reach of the canal. It appears desirable that the subject of *takkávi* advances in such tracts should be taken into active consideration, unless, indeed, it is contemplated to introduce canals. But Mr. Forbes represents, on behalf of the cultivators in some parts of the Hápur and Jalálabad parganahs, and other tracts now cut off from the canal, that they should be told, once for all, what is the prospect of their being supplied with canal water, in order that they may know whether or not to sink capital in the construction of wells, which, in their present state of uncertainty, they cannot venture to do. His request is reasonable.[1] Some allusion has been made to the obstruction of the natural course of the drainage of the country by the canal water-courses. It is, therefore, satisfactory to learn that steps have already been taken to remedy this evil. Rs. 20,000 were granted in 1873 for a drainage cut in the Chhaprauli parganah in one of the most injured tracts. The complaint is still made that individual villages have suffered by the canal in the destruction of their wells, owing to the rise in

[1] Mr. Buck, C. S.

the water-level, while the canal has not given them an equal supply in return. But all these evils are capable of being remedied, and will in time cease to exist.

Irrigation from wells.

There are five kinds of wells in this district: the *pukka*, *kuchcha*, *khasiya*, *dahka*, and *dher*. A pukka well is built at an expense, according to depth of excavation, up to Rs. 1,000, and at the bottom a frame of wood is laid perfectly level; this is called the *nahchak*, and is the frame on which the masonry is laid. On this the *gola* is built, and in order to sink the *gola* to the required depth, the earth is excavated from under the *nahchak* by a *chákkun* or well-digger with an instrument called *jham*. The digging goes on till kunkur or a hard stratum is found, when a hole is dug with an iron bar and the water begins to rise; this hole is called the *bám*: hence the term *búmb hona*, said of a well where water is perfectly inexhaustible in quantity. When a cultivator says *sarwa húa* he means that the water was so little that the well could only be worked for part of the day, while *retwa hona* is said of a well which is nearly wholly useless from being choked up with sand and silt. The *kuchcha* well is sometimes merely a deep hole dug in the earth without lining of any kind; sometimes it has a *gulái* or *kothi* made either of joined wood or *ajár* (stalks of *arhar*), or mulberry (*shahtút*.) A *kothi* of joined wood costs from Rs. 40 to Rs. 60.

Khasiya well.

The *khasiya* holds a middle course between the *pukka* and *kuchcha* well, and is found in land where the soil is not of sufficiently firm character to allow of a *kuchcha* well, and where masonry is required to support the sides. Owing to percolation from the canals, except in *bángar* land, *kuchcha* wells do not now last so long as formerly. The average duration of a *kuchcha* well was before 1853-54 from ten to twelve years. It is now less than half this. The *kothis* or grain stores of the Baniyas have suffered from this percolation to an equal extent, for they have become so moist that grain will not remain good in them. The result of this is that corn is moved about much more briskly than formerly. The depth of water from the surface of the ground in land near canals has greatly lessened. In tahsíl Sardhana, where 20 years ago water was from 18 to 25 feet from the surface, it is now to be found at a depth of from 7 to 10 feet and this at a distance of two miles from the canal. In Tíkri in parganah Barnáwa water is found at a depth of 44 feet, in the Sarauli jungle at 46 feet, and in the Hindan *bángar* at Pánchli at 37 feet. In Rasnái Mírpur and Rohta Rasúlpur in parganah Meerut the depth of water has decreased from 33 and 35 feet to 22 and 24 feet. This takes place from the action of a *rajbaha* or distributary canal only. A *dahka* well is one sunk in high ground close by a canal or *rajbaha* whose water from the elevation of the land cannot irrigate it. The well survives from the percolation, and is usually a fairly constructed work. When it is a mere pit on land slightly elevated above a surrounding piece of water the hole is called *dher*.

Cost of well irrigation.

In calculating the cost of well-irrigation there are three items to be regarded —the men, bullocks, and implements. Three men—the *charsiya*, *kilíya* and *panmela*—are required in working a well. Their wages at 2½ annas a day amount to 7½ annas, and the hire of four oxen at 3 or 4 annas, say 14 annas, should be added. Under favourable circumstances, the well not being more than 45 or 50 feet deep, a two *láo* or lift well with four oxen can thoroughly irrigate one pukka bígha, or two-thirds of an acre a day. The labour then per acre will be Rs. 2-2-4; for sugar cane, however, there are generally three waterings. The well irrigation, then, of an acre will be Rs. 6-7, or with wear and tear of ropes and gear Rs. 7. It may be objected that the oxen must be kept by the cultivator for ploughing purposes, and that their labour should not be valued, as they would otherwise be doing nothing. But it appears to be generally agreed that a cultivator whose land receives canal irrigation can cultivate his thirty bíghas with as much facility as the man dependent on well-irrigation can his twenty bíghas. The one great complaint against the canal system is that the *tátils* (or periods of suspension of irrigation) are frequently fixed at times when water is absolutely necessary for the success of a crop.

Amount of well-irrigation.

In 1871 the irrigation from wells in the Meerut tahsíl was returned at 55,132 acres, and from other sources as tanks, jhíls, &c., at 3,328 acres; Sardhana, wells 40,690 acres and tanks, &c., 1,715 acres; Hápur, wells 60,841 acres, and tanks, &c., 2,733 acres; Ghá-ziabad, wells 70,177 acres, and tanks 1,903 acres; Mawána, wells 20,122 acres, and tanks 904 acres, and Bágpat, wells 44,423 acres, and tanks 1,672 acres. The district total for that year shows wells, 291,395 acres; tanks, &c., 12,255 acres, and canals, 280,179 acres, or a grand total of 583,829 acres out of a cultivated area amounting to 1,043,515 acres, leaving only 466,224 acres unirrigated. The wells have held their place to a great extent, though in the best well tracts along the watersheds of the lines of drainage numbers have been destroyed from percolation. This result could not be avoided, since it was necessary to lead the main lines of canal along the same watersheds, to avoid those tracts in which the loose and broken nature of the surface and the disintegration of the under lying strata presented as formidable obstacles to the construction of canal channels as it did formerly to wells.

Blights.

The injuries to which different crops are subject in this district are briefly as follows:—*Silái*, a small insect with dark-red and brown body, which injures sugar cane, maize, and *joár*. *Gobh* is produced by the prevalence of severe winds and consists in the plant giving out little stems which weaken it. *Sundi* is a large black-headed green worm which attacks the plant during the east winds, and attacks gram and peas as soon as the flower appears. *Kukhi* and *ratwa* are little red worms which

attack wheat and barley in the ear, giving a crop quite a red appearance. They appear principally during the prevalence of east winds and excessive rain. *Chhipwa* attacks *til*, *másh* and *sarson*. *Bhaunrí* is a small and very thin earthy-coloured worm with a black head which appears on *joár* when there is drought. *Karanjwa* is the name given to smut in barley. The same name is given to the blight which attacks wheat and sugar cane, when on breaking a stem a dark inky matter exudes. When from the falling of rain *moth* becomes covered with earth the plant dries up. This condition is expressed by villagers as "*tarkwa ne mára.*" The *ál* is an insect which afflicts *kúsum* and *sarson* and the *kanswa* injures sugar cane in the early period of its growth. *Khandwa* is produced by floods in the *kharíf*. *Tiddi* or locusts rarely do damage. They sometimes, however, appear in the kharíf. *Pála* (hoar frost) and *ola* (hailstones) frequently cause much destruction. A crop injured by an adverse wind is said to be *bayár ne mára*. This term is especially used in reference to the sugar cane and cotton crops. Mist *(kuhra)* is most injurious to the *sarson* plant. *Bájra* and *joár* are sometimes afflicted by the worm *gendwa*.

Floods, &c.

This district is not subject to floods to any great extent. Sometimes from the rising of the Ganges and Jumna some damage is done to the *kharíf*, but even this is of rare occurrence. Sometimes, too, from the impeding of drainage by the network of *rajbahas*, some temporary injury is done, but before the succeeding rains can repeat the damage the necessary syphons or aqueducts have, usually, been constructed. Some account of the various drainage schemes taken in hand by the Irrigation Department has already been given, and all that need be said here is that the magnitude of the evil is fully recognized, and prompt measures have now been taken to remedy the defects in the present irrigation lines. To prevent the recurrence of floods from the Jumna in parganah Loni the Jumna embankment has been constructed. The chief difficulty in the way of the work is the sandy character of the soil in the neighbourhood, but it has on the whole been successful.

Famines.

Meerut district is, humanly speaking, safe from the miseries of extreme famine owing to its magnificent system of canal irrigation and facilities for sinking wells. During the last famine year (1868-69), the area watered by the Ganges and Eastern Jumna Canals was 311,825 acres, or 30 per cent. of the cultivation. The total irrigated area from wells and canals was 577,346 acres, or 56 per cent. of the cultivation. 166,407 acres of the canal tracts were sown with wheat, and the impetus given by the high prices to the production of food and fodder crops was very great. The Panjab and Dehli Railway now runs from north to south, joining the East Indian Railway at Gháziabad, and thus opens a passage for the commerce of the lower Duáb. The Ganges and Jumna rivers and Ganges canal further facilitate

trade. There are good roads connecting the great centres of population with one another; and the imperial lines of road and the railways form channels of communication with surrounding districts. While therefore Meerut possessed good natural advantages increased manifold by art, it also enjoyed an accessible situation during the famine of 1868-69, and it was heavy exports from this district that kept up prices in it. The grain exported from the district at first to the lower Duáb, and later on to the Panjáb, Saháranpur, and Rohilkhand, is estimated at more than half a million of maunds. There was no widespread suffering in Meerut: works were undertaken experimentally at various points, but the people did not resort to them, and whatever need for relief there was appeared among the poorer urban classes alone, and among them for a short time only. The prices ruling during the seasons of scarcity are given under "prices."

Bricks.

There is no stone in this district except such as is brought from Dehli and Agra. The average price of the small brick (*lakhora*), the dimensions of which are $5'' \times 3\frac{1}{2}'' \times 1''$, is Rs. 125 per lakh, or 100,000, at the kiln stacked; of the next in size about Rs. 200 or Rs. 225 per lakh; and of the large Government brick called *guma*, $12'' \times 6''$, the price at the kiln is from Rs. 650 to Rs. 800 per lakh.

Timber.

Sál (*Shorea robusta*) is not grown in this district, but large quantities are brought down from Hardwár by the Ganges Canal. *Shísham* (*Dalbergia sissu*) and other woods are largely grown in this district; the average price per foot is twenty annas. The usual price of *jáman* (*Eugenia jambolanum*) is twelve annas; of *ním* (*Azadarachta Indica*) also 12 annas, and of mango (*Mangifera Indica*) eight annas per cubic foot. Kíkar (*Acacia Arabica*) is much used in making agricultural implements as ploughs, *gárís*, and the *kolhu* or sugar-mill pressing logs. The wood of the *gúlar* (*Ficus racemosa*) is used always for making the *kotha* or foundation-frame of a well, as damp does not injure it. The wood of the *siras* (*Albizzia lebbek*) is little used for building purposes. *Jáman* wood will, as a rule, not last more than twenty years; after that it becomes afflicted with a dry rot. *Mahúa* or *maua* (*Bassia latifolia*) is not much grown, but its wood is much esteemed. *Dhák* (*Butea frondosa*) is largely grown and much used in building. From *shahtút* or mulberry (*Morus Indica*) the villagers make yokes for their oxen; the wood is considered particularly soft and strong. *Sémbal* (*Bombax Malabaricum*) is used for beams; *tún* (*Cedrela toona*) only for ornamental beams and supports.

Lime.

The value of kunkur lime is about ten or twelve rupees per 100 maunds. In the Gháziabad tahsíl, lime is manufactured from kunkur found in pits in the village of Chhajupur; in the parganah of Hápur, at Ayálnagar and at Sadullahpur; in tahsíl Sardhana, near Malahra, and in parganah Meerut at Tihrot, and in the neighbourhood of Meerut. Kunkur is of two kinds: the large block kunkur so extensively used in canal works is

called *chatán*, the small kunkur for roads is termed *bichhwa*. The most extensive kunkur pits from which *chatán* is dug are those of Nándpur and Naráyanpur in the tahsíl of Ghaziabad, and in the same locality many other villages have pits of *bichhwa*. In parganah Garhmuktesar there are kunkur pits at Faridpur, Sikhera, Rájpur, and Dattiyána; in parganah Saráwa at Rasúlpur Dantla; in parganah Hápur at Náli Hasanpur and Brijnáthpur, a village also known as Bahramand Básh. In Meerut, kunkur is found in many villages. The pit nearest the city and cantonments is that in the present police lines near the old cantonments of the Sappers and Miners. In the parganahs included in tahsíls Bágpat, Mawána and Sardhana kunkur is found, but is not so extensively scattered as in the southern portions of the district. Kunkur for roads must be stacked nine inches deep for consolidation to six inches. The quantity on a mile of a road 12 feet wide would therefore be 47,520 cubic feet. The cost at Rs. 4 per 100 cubic feet would be Rs. 1,900. The cost per 100 cubic feet is for excavation, cleaning and stacking one rupee, consolidation twelve annas, and cartage at the following rates per mile: for one mile twelve annas, and for each succeeding mile one anna less per mile up to five miles. From 6 to 8 miles, 8 annas; from 8 to 14 miles, 7 annas; and above that 6 annas.

Salt.

The principal source from which salt was formerly obtained in the Meerut district is the extensive salt tracts of Ghaziabad, portions of which lie in the Loni parganah and portions in the Bulandshahr district (page 34). This salt tract is situated in the low-lying *khádir* lands of the Jumna, and stretches from beyond the town of Loni along the banks of the Jumna, to within the boundary of the Bulandshahr district. Since 1833 A. D. the manufacture of salt on this tract has been entirely suppressed, but previous to that year many thousand maunds of salt of a good quality used to be manufactured yearly. A little saltpetre is manufactured in this district: about 150 factories (all crude), producing from 150 to 200 maunds each, being worked yearly: of this number, the majority are clustered in parganah Bágpat, and the remainder are scattered all over the district. Previous to 1867 a saltpetre refinery was worked at Hápur, but since that year it has been closed owing to the depressed condition of the saltpetre trade. Impure carbonate of soda, or as it is usually called "*reh*," is found in small quantities in most places notably in the low lying *khádir* lands of the Hindan. It is collected and used in washing by dhobis.

Saltpetre.

PART III.

INHABITANTS OF THE DISTRICT.

Population.

THE first enumeration of the population of this district took place in 1847 under the superintendence of Mr. C. Gubbins and Mr. E. C. Bayley. Owing to the changes that have taken place in the

distribution of the parganahs since then, it would be useless to give the parganah details.[1] The district as it then stood contained a population of 860,736 souls, or 488 to the square mile. Of these 329,133 were Hindús engaged in agriculture, and 327,704 were Hindús occupied in employments other than agriculture. The Muhammadans numbered 203,899 souls of whom 140,923 were engaged in occupations other than agriculture. From this it will be seen that about one-half the Hindús and two-thirds of the Musalmán population derived their livelihood from pursuits unconnected with the cultivation of the soil. The total number of villages was found to be 1,774, of which 317 were uninhabited. Of the inhabited villages 1,252 contained less than 1,000 inhabitants, 187 between 1,000 and 5,000, 13 between 5,000 and 10,000, and five between 10,000 and 50,000.

Census of 1853.

The first regular census was taken on the eve of the new year of 1853. The returns for this year are given under the present distribution into parganahs, and are therefore of some value for detailed comparison.[2] The total population of the district, as it then stood, numbered 1,135,072 souls, giving 516 to the square mile. Of these 885,238 were Hindús and 249,834 were Musalmáns. The Hindús showed 427,785 employed in agriculture, of whom only 190,680 were females. The Hindu non-agricultural population numbered 457,453 souls, of whom 211,639 were females. From this it appears that in 1853, the percentage of Hindu females of the agricultural population to the total Hindu agricultural population was 44·5, and amongst those not engaged in agriculture was 46·4—a difference most probably due to the practice of infanticide and observable to the present day. The Musalmán population numbered only 82,350 agriculturists, of whom 38,354 were females, while those otherwise employed were 167,484, of whom 79,098 were females. Here we have the position of females reversed, the agricultural female population numbering 46·5 per cent. of the total agricultural population while the remainder are only 41·2 per cent. of their class. There were 1,077 villages containing less than 1,000 inhabitants, 288 with more than 1,000 and less than 5,000, five towns between 5,000 and 10,000, and three between 10,000 and 50,000.

Census of 1865.

The next regular census was taken on the 10th of January, 1865, and forms the first important collection of statistics that we possess. The principal results regarding this district are shown below and compared with the census of 1853. The table gives the parganah population according to sex and religion and the density per square mile.

[1] They may be found in Shakespear's Memoir, Calcutta, 1848. The changes made in 1852 and noted under administrative sub-divisions on a previous page should be remembered in connection with the subsequent years. The district then lost 135 villages.

[2] See Christian's Report, page 120: Calcutta, 1854.

Pargannah.		*Hindús.*			*Musalmáns.*			*Total population.*			Population per square mile.
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	
Meerut,	1865,	109,420	94,747	2,04,167	35,160	29,214	64,374	144,580	123,961	268,541	712
	1853,	120,428	98,012	2,18,440	43,707	36,886	80,593	164,135	134,898	299,033	793
Hápur,	1865,	38,186	32,876	71,012	10,422	9,326	19,748	48,558	42,202	90,760	551
	1853,	37,298	32,476	69,774	9,891	9,053	18,944	47,589	41,529	89,118	541
Garhmuktesar,	1865,	20,477	13,190	33,667	7,305	5,862	13,167	23,882	19,052	42,934	404
	1853,	16,686	14,372	31,058	6,613	5,997	12,610	23,299	20,369	43,668	416
Saráwa,	1865,	13,344	11,889	25,233	4,851	4,361	9,212	18,195	16,250	34,445	443
	1853,	14,156	12,022	26,178	5,037	4,472	9,509	19,193	16,494	35,687	459
Sardhana.	1865,	32,791	27,453	60,244	10,961	9,732	20,693	43,752	37,185	80,937	592
	1853,	32,532	26,656	59,188	10,976	9,931	20,907	43,508	36,587	80,095	585
Barnáwa.	1865,	29,374	24,797	64,171	4,852	4,315	9,167	34,226	29,112	63,338	559
	1853,	27,614	22,889	50,503	4,491	4,043	8,534	32,105	26,932	59,037	521
Kithor,	1865,	18,000	14 370	32,370	15,532	14,756	30,288	33,532	29,126	62,658	322
	1853,	27.096	22,727	49,823	8,637	7,742	16,379	35 733	30,469	66,202	342
Dásna,	1865,	27,857	23,710	51,567	10,163	9,180	19,343	38,020	22,890	70,910	524
	1858,	27,315	22,548	49,863	9,238	8,516	17,754	36,553	31,064	67,617	499
Jalálabad.	1865,	43,357	36,211	79,568	9,205	8,419	17,624	52,562	44,630	97,192	485
	1853,	41,757	36,009	77,766	8,143	7,662	15,805	49,900	43,671	93,571	467
Bágpat	1865,	27,687	39,055	66,742	9,722	8,683	18 405	56,409	47,738	104,147	542
	1853,	43,242	35,305	78,547	7,025	6,350	13,375	50,267	41,655	91,922	478
Baraut,	1865,	21,474	18,367	39,841	7,123	6 290	13,413	28,597	24,657	53,254	699
	1853,	21,203	17,434	38,637	4,143	3,622	7,765	15,346	21,056	46,402	609
Kutána,	1865,	21,328	17,795	39,123	2,099	1,948	4,047	23,427	19,743	43,170	586
	1853,	18,695	15,709	34,404	2,064	2,036	4,100	20,759	17,745	38,504	520
Chhaprauli.	1865,	16,972	14,216	31,188	2,379	2,017	4,396	19,351	16,233	35,584	614
	1853,	15,187	13,193	28,193	2,784	2,467	5,251	17,971	15,473	33,444	577
Púth,	1865,	9,023	7,810	16,833	2,246	2,066	4,312	11,269	9,876	21,143	329
	1853,	8,876	7,948	16,824	2,043	1,999	4,042	10,919	9,947	20,866	350
Hastinápur.	1865,	20,605	16,395	37,000	17,200	14,866	32,066	37,805	31,261	69,066	293
	1853,	30,434	25,206	55,640	7,590	6,676	14,266	38 024	31,882	69,906	216
Loni,	1865,	26,810	22,171	48,981	4,769	7,762	12,531	33,516	27,996	61,512	397
Total,	1853,	482,919	402,319	885,258	132,382	117,452	249 834	615,301	519,771	1,135,072	516
	1865,	496,796	416,949	913,745	159,889	137,647	297,536	656,685	554,596	1,211,281	513
	1872,	537,188	454,038	991,226	147,756	134,101	281,857	685,404	588,510	1,273,914	541

The grand total in 1865 includes 1,463 railway employés and 10,225 military. Besides these, the Europeans in 1865 numbered 2,590 souls and the Eurasians 329. In 1872 there were 2,194 Europeans and 142 Eurasians.

In 1865 there were 297,784 houses in the district, giving 4·02 persons to each house. In Meerut city, the houses numbered 15,497, giving 3·57 to each house, and in cantonments there were 7,886 houses, with 3·03 inhabitants to each house. There were 292 villages with less than 200 inhabitants, 488 with from 200 to 500, 359 with from 500 to 1,000, 225 with from 1,000 to 2,000, 87 with from 2,000 to 15,000, 10 with from 5,000 to 10,000, two from 10,000 to 50,000 (Sardhana and Hápur), and Meerut city and cantonments with 79,378 inhabitants.

In 1872 the census was effected on the night of the 18th of January. It gives a more complete enumeration than any other previously attempted, and may be accepted as absolutely correct in regard to

Census of 1872.

numbers and as a fair estimate in matters of caste distinctions.[1] There were 1,573 villages in the district in 1872, containing 131,563 enclosures and 268,650 houses. These numbers give 0·7 villages to each square mile, 811 inhabitants to each village, 55 enclosures to each square mile, and nine souls to each enclosure. There are 114 houses in each square mile, giving an average of 4·7 persons in each house. Of the houses, 19,928 were built with skilled labour and were inhabited by 91,711 souls, or 7·2 per cent. of the total population, while 1,182,203 persons, or 92·8 per cent. of the inhabitants, occupied 248,722 houses of the inferior sort. There were 322 villages having less than 200 inhabitants, 488 with from 200 to 500, 413 with from 500 to 1,000, 243 with from 1,000 to 2,000, 58 with from 2,000 to 3,000, 34 with from 3,000 to 5,000, 12 with from 5,000 to 10,000, two with from 10,000 to 15,000, and one (Meerut) having a population exceeding 50,000. The density of the population of the whole district was 541 to the square mile.

The statistics as to sex and religion for each parganah in the district are given in the following table, with the broad division of age into minors (15 years and under) and adults :—

Religion.

Parganah.	Hindus.				Muhammadans and others not Hindus.				Total.			Population per square mile.
	Up to 15 years.		*Adults.*		*Up to 15 years.*		*Adults.*					
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.	
Meerut with City and Cantonments,	43,026	33,252	67,246	58,218	14,849	12,863	24,005	22,460	148,106	126,793	274,899	751
Hapur, ...	16,603	13,337	23,602	21,939	4,624	3,747	6,517	6,407	51,346	45,430	96,776	594
Sarawa, ...	5,976	4,789	8,284	8,018	2,198	1,876	2,944	3,160	19,402	17,853	37,255	490
Garhmuktesar, ...	7,187	5,904	10,530	9,422	2,930	2,479	4,317	4,144	24,964	21,949	46,913	417
Path, ...	4,336	3,704	6,007	5,352	1,013	932	1,409	1,443	12,765	11,431	24,196	373
Jalálabad, ...	18,834	14,152	28,177	25,034	4,094	3,522	6,058	5,984	57,167	48,392	105,559	525
Dasna, ...	13,421	10,533	18,635	16,493	4,798	4,268	6,694	6,491	43,548	37,785	81,333	594
Loni, ...	11,873	9,034	17,049	14,769	2,773	2,556	4,384	3,907	33,079	30,066	66,115	424
Bágpat, ...	20,088	15,330	29,811	26,176	3,568	2,909	5,310	4,976	58,777	49,391	108,168	558
Kutána ...	8,922	7,156	13,145	11,485	1,043	868	1,509	1,134	24,618	20,943	45,561	624
Baraut, ...	10,029	8,058	14,870	13,099	2,178	1,847	3,505	2,949	30,288	25,952	56,240	740
Chhaprauli, ...	6,277	5,359	10,298	9,222	1,522	1,087	1,960	1,843	20,464	17,611	37,975	614
Barnawa, ...	12,140	9,609	17,845	16,036	2,129	1,691	2,980	2,767	34,494	30,103	64,997	570
Sardhana, ...	12,885	10,064	20,191	17,418	4,703	3,756	6,903	6,502	44,661	37,740	82,401	601
Hastinápur, ...	13,652	10,549	18,971	16,900	3,251	2,825	4,848	4,438	40,732	34,612	75,344	311
Kithor, ...	11,858	9,223	16,031	14,493	4,120	3,439	5,584	5,404	37,593	32,559	70,152	369

The total population numbers 1,273,914, giving 541 persons to the square mile, and comprises 685,404 males and 588,510 females. The total number of Hindú males is 537,188, or 54·2 per cent. of the entire Hindú population: Hindú females number 454,038 souls, or 45·8 per cent.; Musalmán males number 147,756, or 52·4 per cent. of the whole Musalmán population, and females of the same religion number 124,101, or 47·6 per cent. Amongst the Muhammadans in the above table are included 460 Christian males and 371 Christian

[1] The parganah details are not given here, they will be found under the parganah notices in the *Gazetteer* portion of this District.

females. The percentage of Hindús on the total population is 77·8, and of Musalmáns 22·2, or 10 Musalmáns to every 35 Hindús. The percentage of males on the total population is 53·8, and of females 46·2; the divisional percentages being 54 and 46 respectively.

Infirmities.

Statistics relating to infirmities were collected for the first time in 1872 and give the following results. There were 86 insane *(págal* or *majnún)* persons (26 females), or 0·6 per 10,000 of the total population; 54 persons (13 females) were returned as idiots *(fátir-ul-akl* or *kamsamajh)*, giving 0·4 per 10,000; 145 (61 females) were deaf and dumb *(bahra aur gunga)*, or 0·11 per 1,000; 2,866 (1,211 females) were blind *(andha)*, or 0·22 per cent., and 305 (36 females) were lepers *(korhi* or *jazámi)*, or 0·02 per cent. of the total population.

Statistics of age.

Statistics of age were also recorded for the first time in 1872. The following statement gives the district totals for Hindús and Musalmáns of each sex at different ages, with the percentage on the total population of the same religion. The total population is given irrespective of religion :—

Age.	*Hindús.*				*Musalmáns.*				*Total population.*			
	Males.	Percentage on total Hindús.	Females.	Percentage.	Males.	Percentage on total Musalmáns	Females.	Percentage.	Males.	Percentage on total population.	Females.	Percentage on total population.
Up to 1 year ...	25,799	4·8	22,711	5·0	7,226	4·8	6,746	5·0	33,051	4·8	29,479	5·0
Between 1 and 6 ...	77,368	14·4	65,906	14·5	21,212	14·3	19,638	14·6	98,651	14·4	85,581	14·5
„ 6 and 12 ..	81,964	15·3	58,532	12·8	22,702	15·3	17,501	13·0	104,750	15·2	76,072	12·9
„ 12 and 20 ...	87,489	16·2	70,240	15·4	23,373	15·8	21,146	15·7	110,949	16·1	91,440	15·5
„ 20 and 30 ...	103,929	19·3	90,291	19·8	29,145	19·7	26,775	19·9	133,136	19·4	117,158	19·9
„ 30 and 40 ...	74,545	13·8	64,682	14·2	19,955	13·5	18,842	13·6	94,551	13·7	83,074	14·1
„ 40 and 50 ...	47,570	8·8	43,373	9·5	12,902	8·7	12,358	9·2	60,518	8·8	55,783	9·4
„ 50 and 60 ...	25,541	4·7	24,404	5·3	7,105	4·8	7,203	5·3	32,667	4·7	31,628	5·3
Above 60 ..	12,983	2·2	13,899	3·0	4,136	2·7	4,389	3·2	17,131	2·4	18,295	3·1

Taking the children up to 12 years of age, we find there are 344·9 boys and 324·7 girls in every 1,000 of the same sex or 334·8 taking both sexes, against

354 in England. From 0 to 10 as compared with England the proportion of children is greater; from 10 to 15 there is a falling off; from 15 to 40 again an excess. The decrease between 10 and 15 occurs principally in girls, and Mr. Plowden considers this is mainly attributable to the fact that the existence of girls of that age is systematically concealed[1].

Infant life.

In the Meerut district great care was taken by Mr. Plowden to insure accurate statistics of child life. He found 33,051 male children up to one year of age, of whom 13,238 children were exactly under one year, leaving 19,813 males under one year of age. The female children up to one year of age numbered 29,479, of whom 12,127 were exactly of the age of one year, leaving 17,352 female children under one year. These figures afford fair data for calculating the number of infants in a district, and as it is the only district where much care has been taken on this point, I will make no apology for introducing here Mr. Plowden's comparative table, the proportion borne by infants at this term of life to the total population of both sexes per 10,000 of the population:—

Place.	Year of census.	Both sexes.	Male.	Female.
Meerut, ...	1872	2,919	2,890	2,948
England, ...	1861	2,935	2,997	2,874
France, ...	1861	2,168	2,211	2,125
Italy, ...	1870	3,331	3,394	3,270

On these figures Mr. Plowden remarks that though apparently assimilating more closely to the English than to the Italian numbers for the first period of life, yet "taking into consideration the high figures given for the quinquennial period, 0 to 5, I consider we are justified in accepting it as a fact that the average duration of life in this country is very much lower—lower to an extent which has not yet been noticed in public records—than is the duration of life in England; and further than this, it may, I think, be said the Italian average duration is nearly approached in this province." In support of his argument Mr. Plowden quotes the mortuary statistics of seventy rural circles in which the rate of mortality exceeds the Italian average, and is far above the English rate. The quinquennial periods up to fifteen years of age referred to above, *viz.*, from 0 to 5, 5 to 10, and 10 to 15 show a proportion of both sexes to the total population of 16·8, 12·1 and 10·1 respectively, the proportion of females to the total population during the same periods being 17·0, 11·4, and 9·0 per cent.

[1] For a further notice of this interesting point, see Census Report, I., liv.—lix. The details of ages exceeding 60 years for this district are given, *ibid*, 450.

Here we see the females in excess during the first period, and decreasing during the other two.

Castes.

Taking the Hindús and distributing them amongst the four great classes of Brahmans, Rajpúts, Baniyas and other castes, we find in the Meerut district there were 109,804 Brahmans, of whom 50,396 were females; 55,033 Rajpúts (23,830 females); 69,942 Baniyas (31,832 females), while all the other castes numbered 756,447 souls, of whom 347,980 were females.

Brahmans.

The Brahmans comprise 11·1 per cent. of the total Hindu population, and principally belong to the great Gaur division, which here numbers 95,809 souls (44,216 females); next come the Saraswat (2,130); Bhát (1,807); Acháraj (1,644); Dakaut (1,509); Chaurasiya (1,269); Dasa (574); Gujráti (813); Sanádh (623); Bohra (474); Gautam (581); Kanaujiya (551); Pallewál (350); Taga (355), and Sarwariya (215). Gangaputr, Kashmíri, Kándhlawál, or Khandelwál, Nagar, Padhe, Pachháde, Rahiya and Vasisht Brahmans are also met with in small numbers. As landholders[1] they are chiefly found in the Bágpat, Hápur, and Meerut tahsíls. The Bháraddhvaj *gotra* holds 12 villages; Gorau, 3; Alambáh, 2; Kishnátri, 1; Dichhit, 2; Soti, 2; Tiwári, 1; Gautam, 8; Gaur, 26; Surajdhvaj, 1; Bangáli, 1; Gárg, 1; Pachhas, 7; Barásur, 3; Kasbásur, 1; Dálab, 1; Ataghan, 1; Tonga, 1, and Kausik, 1, or a total of 75 villages. In the Gaur division the Gaur tribe is the most important, and in the Drávira division the Gujrátis are the most numerous members in this district. The Acháraj subdivision holds one village in Bágpat occupied by members of the Kátyán clan. The above details are given according to the classification shown in the census returns and in the reports on the land-owning tribes. As a matter of fact, all Brahmans belong to either of two divisions, the Gaur or the Drávira. The first prevails in the north of India, and the latter in the south, but Dráviras are also fairly represented in every district in these provinces. Each of these primary divisions contains five great tribes, which again admit of almost endless subdivision. The tribes of the Gaur[2] division are the Kanaujiya, Sáraswat or Sarasút, Gaur, Maithil and Utkal, and the five tribes of the Drávira subdivision are the Maháráshtra, Tailang, Drávira, Karnát and Gurjjar. In addition to the Brahmans of the ten tribes there are numerous subdivisions bearing the name of Brahman and performing certain religious ceremonies usually attempted only by Brahmans, of whom some mention must be made.

[1] The statistics as to the landowning tribes were carefully compiled by Nasír Ali Khán, late Deputy Collector of Meerut, at the request of Mr. S. H. James, C.S., and contain the most accurate record of landholders in this district that we possess. [2] There is good reason for believing that the word 'Gaur' has no connection with Gaura, an old name for Bengal, and that it represents the name of a kingdom in eastern of Oudh, traces of which are seen in the word Gonda, which still gives a name to a district.

In most of the caste lists they are placed in a division by themselves called the "*Das-ke-siwái.*" The principal are as follows:—

1. Máthur or Mathura-ke-Chaube.
2. Mágadh or Gayawal.
3. Shákdwípi.
4. Málawi.
5. Saptshati Bangáli.
6. Shenavi or Senavi.
7. Palashe.
8. Bhandariye or Maddáli or Dakaut or Joshi.
9. Mahabrahman or Acháraj.
10. Sawálakhiya.
11. Gangaputr.
12. Prayágwál.
13. Bhuinhár.
14. Sengardaro.
15. Sanakáhár.
16. Thatiya.
17. Párásbari.
18. Píráli Bangáli.
19. Ahavási or Haiwasi.
20. Purait.
21. Byás.
22. Yamunaputr.
23. Bilawár,
24. Rishíshvar.
25. Ajáchi.
26. Gurjjar Kurmáchali.
27. Parvati or Pahári or Nayapáli.
28. Kurmáchali or Kumaoni.
29. Kanaujiya Kurmáchali.
30. Maháráshtra Kurmáchali.
31. Puráne Kurmáchali.
32. Katthak.
33. Bhát or Rajbhat or Jasaundhi.
34. Lingiye.
35. Ghátiye.
36. Pallewál or Bárhar or Athbariya or Bohra or Káinya.
37. Bágariya or Parchúnga.
38. Pande.
39. Unauriya.
40. Golapúrab.
41. Nári.
42. Lyáriye.
43. Myále.
44. Dasadwípi.
45. Brahmans of Dehra Dún.
46. Suraula.
47. Gingára.
48. The numerous hill Brahmans in Northern India.

With the exception of the first four Drávira tribes not one of the ten tribes or these forty-eight outside tribes eat together or intermarry. The Gaur tribe of Kanaujiyas will be noticed under the Etáwa district and I will here give a short account of the Gaur tribe of the division. The caste lists give the following sub-tribes as belonging to the Gaurs:—Adigaur, Srigaur, Sanádh or Sanorhiyas, Taga (?) Madhya Sreni Bangáli, Hiranya or Hariyánewála, Pushkarne Gaur, Bhojaka, Bhárgava, Sháhábádi, Purbiye Gaur, Pachháde, Chaurásiya, Thákuráyan, Kakariya, Dasagaur and Deswáli Chhannat. Of the last sub-tribe, which is chiefly confined to Málwa, there are six branches:—the Gurjjar Gaur, Párikh, Sikhawál, Dáyama or Dadhicha, Khandelwá lor Kándhlawal and Ojha or Gaur Sáraswat. To obtain an accurate idea of the distribution of these tribes it is necessary to add together all the scattered entries in the census returns and compare them with the total number of Brahmans in each district. The following statement shows the number of Brahmans of the Gaur tribe and the total number of Brahmans in the districts in which the Gaur tribe is predominant. The Tagas are separately given as it is more than doubtful whether they should be included amongst the Brahmans, and it should be remembered that the Brahmans entered only under the name of their *gotras* or as unspecified form no inconsiderable number in the census returns, so that the figures as to the number of Gaurs here given must be taken as an estimate below the actual numbers.[1]

[1] In Aligarh alone 106,517 Brahmans are entered as unspecified, and in Muttra 115,226.

District.	Gaur tribe.	Total number of Brahmans.	Tagas.
Dehra Dún, ...	1,154	10,279	...
Sahárunpur, ...	41,078	45,148	15,208
Muzaffarnagar, ...	38,395	40,654	11,947
Meerut, ...	97,734	109,449	43,417
Bulandshahr	87,466	98,932	6,755
Aligarh, ...	32,692	148,249	...
Bijnaur, ...	26,792	28,789	10,505
Moradabad, ...	31,085	47,744	11,055
Budaon, ...	55,840	63,541	...
Bareilly, ...	7,932	76,442	...
Muttra, ...	22,543	148,762	...
Etáwa, ...	37,416	93,082	...

The Gaurs are distributed throughout the Meerut division, the western districts of Rohilkhand, and the northern districts of the Agra division. In the Agra district and southwards, through the Duáb and in eastern Rohilkhand, they give place to the Kanaujiyas. Each of the sub-tribes is divided into *gotras* bearing specific titles such as Dikshit, Chaube, Tiwári, Gautam, Nirmal, &c. Thus the following *gotras* have the titles annexed to them:—

Gotra.	*Title.*
Kausik, ...	Dichhit.
Kishnátri, ...	Chaube.
Bháraddhvaj, ...	Tiwári.
Parásur, ...	Nirmal.
Vatsa, ...	Nágwán.
Gautam, ...	Vidhata.
Sandil, ...	Haritwál.
Vaiesht, ...	Ghágsán.

There is such confusion between the titles of *gotras* and the names of the *gotras* themselves, not only in the census papers but amongst the people, that it is hopeless, at present, to arrange these intricate subdivisions on an intelligible basis. The recent discovery of an inscription of the third century in which mention is made of a Gaur Brahman (see page 83) entirely upsets the theory that the Gaurs came from Bengal, as at that time the name of Gaur was unknown there. There can be little doubt that the Bengáli Gaurs are the descendants of immigrants from these provinces like the Káyaths. The Gaurs proper deny that the Tagás belong to their division, and put them in the same class as the Bhúinhárs further south, as almost outside the pale of Brahmanism. The many calls upon my attention must be my excuse for leaving this and other interesting questions unsifted, which, however valuable for ethnological purposes, are somewhat removed from the objects of practical utility, steadily kept in view by me in preparing the present work.

Rajpúts.

The different clans of Rajpúts found at the census in 1872, with their numbers, are given below. It will be seen that Chauháns, Gahlots, and Tuárs alone include nearly two-thirds of the Hindús classed under this head:—

Badgújar, ...	1,057	Dor, ...	107	Janwar, ...	11	Purabiya, ...	18
Bais, ...	73	Dikshit, ...	16	Jhatiyána, ...	15	Rahtor, ...	110
Bhál, ...	4,739	Dáhima, ...	624	Kachhwáha,...	1,680	Raghubansi,...	180
Báchhal, ...	24	Dilwat, ...	49	Kinwar, ...	9	Ráua, ...	213
Bargiyan, ...	10	Gargbansi, ...	15	Kachhaura, ...	425	Ráwat, ...	23
Bhitta, ...	66	Gahlot, ...	10,222	Kasyapa, ...	13	Surajbansi, ...	51
Bishn, ...	124	Gaur, ...	203	Ladwa, ...	103	Solankhi, ...	330
Bháraddhváj,	18	Gaharwár, ...	500	Mína, ...	3	Sisodiya, ...	558
Bhatti, ...	30	Gautam, ...	5	Mohil, ...	57	Sombansi, ...	801
Bhimala, ...	210	Han, ...	86	Mohrawar, ...	241	Sangjàl, ...	44
Chauhán, ...	17,207	Hanumán, ...	129	Nirbán, ...	71	Sanghawat, ...	9
Chandel, ...	29	Jaiswár, ...	15	Nirmal, ...	16	Tuár, ...	11,698
Chamargaur,	80	Janghára, ...	205	Panwár, ...	1,159	Tanak, ...	62
Dhengar, ...	272	Jádon, ...	328	Pundir, ...	340	Tamota, ...	17

Besides these tribes 269 persons were classed amongst Rajpúts without any specification. The Rajpúts form but 5·6 per cent. of the total Hindu population in this district. Like the Brahmans, this list includes a number of mere *gotras* and titles which I am unable to assign to their proper tribes.

The Rajpúts as landholders.

The Hindu Rajpút clans in the district are zamíndárs in 194 villages, and Musalmán Rajpúts hold 48 villages. The largest landholders are the Gahlots, Tuárs or Tanwárs, and Sombansis. The Gahlots were a powerful tribe in the twelfth century. One of Prithiráj's best generals was Govind Rao, a chief of this tribe, who is said to have resided at Dehra in this district. They now hold four villages in the Bágpat tahsíl, 7 in Hápur, and 27 in Gháziabad. Musalmán Gahlots hold nine villages. The Tuárs, Tanwárs or Tomars are very numerous in this district. They look on themselves as the descendants of the Pándavas, and many claim kinship with the Tomar dynasty of Dehli that was overthrown by the Chauháns. They now hold two villages in Mawána, 32 in Hápur, 12 in Meerut, and 34 in the Gháziabad tahsíl. The owners of the 32 villages in parganah Púth of the Hápur tahsíl call themselves descendants of Bahadpál, whom they assert to have been the tenth Raja of the Tomar dynasty of Dehli, and to have founded Bhadsána which has never been deserted to this day by his posterity[1]. Musalmán Tuárs possess eight villages in Hápur and three in Bágpat.

Dors.

The Hindu Dor Rajpúts have but four villages, all of which are situated in the Hápur tahsíl, while their Musalmán brethren in the same tract have16. The Dors originally held the country from Koil to Meerut, and under their leader Hardatta attained to considerable power.[2] It was Hardatta that built the fort of Meerut, founded Hápur, and relieved Baran by paying the ransom demanded by Mahmúd Ghaznavi. About the time of Prithiráj

[1] The name does not occur in the lists given by General Cunningham, (Arch. Sur., I., 149) or in Tieffenthaler's list. [2] See the Bulandshahr district, page 84.

the power of the Dors began to wane. They were pressed by the Mína Meos on the one side, while the Gahlots expelled them from Dásna on the other. The Badgújars are another old tribe still in possession of a large number of villages in Bulandshahr. They occupied the southern portion of this district also. The chief of them here is the Sábitkháni family of Pilkua or Pilkhuwa but their influence ended with Daulat Rao Singh, whose estates were sold by auction in 1815. The Nirbán or Nirbhán Rajpúts are said to have formerly been a numerous and powerful tribe in this district, but for ages all Nirbháns have been Musalmáns. They now hold only two villages in parganah Loni in tahsíl Gháziabad.

Chauháns proper.

The Chauháns in this district possess zamíndáris in eleven villages. They must not be confounded with the Chauháns mentioned hereafter as a degraded Rajpút tribe, common in Rohilkhand and the upper Duáb. They are found principally in Sardhana, where they have four villages and one each in the Hápur, Mawána, and Meerut tahsíls. The Musalmán Chauháns possess four villages. Panwárs hold five villages in Sardhana and one in Bágpat ; Kachhwahás have six in Sardhana and three in Bágpat; Dáhimas hold three in Bágpat. Sombansis possess 24 villages in Sardhana, where Bhandars have three. Dols have but one village in Bágpat. Samáls have three villages, Ladwas one, Makhláchhas one, Hindu Báchhals six, Musalmán Báchhals one, and Musalmán Panwárs three villages in the Meerut tahsíl. Musalmán Bhattis have four villages in the Hápur tahsíl. Bagarmals have two, Surhas three, and Gaurs three villages in the Gháziabad tahsíl. The Jhatiyánas are found in parganahs Sardhana and Bágpat.

Baniyas.

The Baniyas of Meerut chiefly belong to the Agarwál and Saraugi divisions, and comprise 7·1 per cent. of the entire Hindu population. There were 44,255 Agarwáls in 1872, 13,271 Saraugis, 5,702 Gindaúriyas, 1,796 Bishnois, 1,684 Rastaugis, 1,046 of the Mahesri subdivision, 811 of the Raja-ke-Barádari, 261 Rautgis, and 28 Khandelwals or Kándhlawals. As might be expected, they form an important portion of the landholders in this district, being zamíndárs of 136 villages. The Bánsals hold 30 villages, of which 21 lie in the Gháziabad tahsíl. The Sangals have 26 villages, chiefly in Mawána. The Rautgis or Rohtagis have five villages; the Garg clans hold 53 villages, of which 39 are situated in the Meerut tahsíl; the Maithils have 3 ; Sarwariyas, 1 ; Sandel, 1 ; Kansal, 2 ; Pápariya, 1, Raja-ke-Barádari, 13, Gotal, 5, Gargas 5, and Totral, 1. Of these villages 7 are situated in the Bágpat tahsíl, 39 in Mawána, 3 in Sardhana, 15 in Hápur, 58 in Meerut, and 21 in Ghaazibad. The Agarwáls are said to derive their name from the town of Agaroha on the borders of the Hariána District, whence they emigrated after its capture by Muhammad Sám. The Bishnois are a peculiar sect of Hindús found there and in the neighbouring districts of Rohilkhand; they are more particularly noticed hereafter.

Other castes.

The great mass of the population belongs to the classes included under the head "other castes" at the recent census, which then numbered 756,447 souls, or 76·2 per cent. of the entire Hindú population. They belong to the following tribes:—

Agari,	...	...	433	Kori,	...	...	11,793
Ahár,	...	...	273	Kumhár,	...	...	23,870
Ahír,	...	...	17,291	Kurmi,	...	...	1,213
Baheliya,	...	...	1,344	Kuzagar,	...	...	48
Banbata,	...	...	72	Lodha,	...	...	7,157
Banjára,	...	...	255	Lohár,	...	...	4,662
Bánsphor,	...	...	17	Miunár,	...	...	298
Barhai,	...	...	12,166	Máli,	...	...	17,223
Bári,	...	...	83	Malláh,	...	...	978
Beldár,	...	...	30	Munihár,	...	...	233
Bharbhúnja,	...	...	2,905	Mochi,	...	...	87
Bhat,	...	...	62	Nat,	...	...	1,175
Bhora,	...	...	104	Náik,	...	...	75
Chái,	...	...	134	Núniya,	...	...	137
Chamár,	...	...	197,273	Orh,	...	...	6,327
Chhípi,	...	...	3,401	Pási,	...	...	408
Darzi,	...	...	782	Patuhra,	...	...	203
Dhának,	...	...	1,570	Rahti,	...	...	372
Dhobi,	...	...	1,821	Ráin,	...	...	4
Dhúna,	...	...	1,942	Ramaiya,	...	...	102
Dom,	...	...	23	Rangrez,	...	...	169
Dusádh,	...	...	60	Rawa,	...	...	3,299
Gadhela,	...	...	70	Riwari,	...	...	52
Garariya,	...	...	14,171	Sáisi,	...	...	637
Ghosi,	...	...	666	Saikalgar,	...	...	3
Gújar,	...	...	60,350	Sáni,	...	...	5,873
Hajjám,	...	...	19,359	Shoragar,	...	...	73
Halwái	...	...	58	Sonár,	...	...	7,503
Ját,	...	...	145,514	Taga,	...	...	43,062
Jotshi,	...	...	31	Tamolí,	...	...	281
Juláha,	...	...	10,698	Tawáif,	...	...	42
Káchhi,	...	...	423	Teli,	...	...	966
Kahár,	...	...	35,985	Thathera,	...	...	30
Kalwár,	...	...	2,083	Vaishnu,	...	...	182
Kamboh,	...	...	743	Bairágí,	...	...	3,913
Kanjar,	...	...	651	Barwa,	...	...	82
Kánpri,	...	...	63	Fakír,	...	...	904
Káyath,	...	...	3,740	Gosháin,	...	...	5,825
Khági,	...	...	715	Jogi,	...	...	11,292
Khákrob,	...	...	50,107	Sádh,	...	...	407
Khatík,	...	...	6,025	Bangáli,	...	...	146
Khattri,	...	...	1,880	Unspecified,	...	...	1,661

Játs.

The Játs are the most important and most industrious of all the cultivators not only in this district but in the entire Meerut division. As proprietors they hold zamíndáris in 488 villages, and altogether have influenced the character of Meerut more than any other caste. In the Duáb they are divided into two great classes—the Hele and the Dhe, corresponding to the Pachháde and Deswale of Rohilkhand and Dehli. The Hele subdivision is by far the most numerous in this district. Heles are found in every parganah. The Dhes occupy several villages in the neighbourhood of Bábúgarh and Hápur as Bachota; in the Sardhana tahsíl they hold Chabariya, and in Meerut, Zainpur and other villages in its neighbourhood. The Heles and Dhes do not intermarry. The Heles profess a great contempt for the Dhes, apparently on the ground that the latter smoke, take food and

drink with Nais. The Dhes, too, are followers for the most part of Nának Sháh, and call themselves Sikhs, though their usages do not in many respects correspond. The Dhes are in fact a later colony, and in their efforts to provide for themselves have interfered with the comfort of their Hele brethren, who appear to have arrived in the district at a very early date. They all say that they came here from Jaisalmer about 1,100 years ago, and this may be considered as a very close approximation to the truth. They first settled in the north-west corner and drove out the Tagas from Chhaprauli, Kutána, and Baraut, and gradually extended their possessions throughout the whole district.

Játs as landowners.

The most numerous clans of the Játs in this district are the Salakláin, Saráwat, Dalál, Jhar, Dewate, Nahri, and Suranj. The Salakláin hold 52 villages in Bágpat and 16 in Sardhana; the Saráwats have 20 villages, of which 12 are in Ghaziabad, five in Mawána, and two in Bágpat. The Daláls hold 36 villages in the Hápur tahsíl and two elsewhere. The Jhars have 16 villages in Hápur and 14 in Mawána. The Dewates possess 26 villages in the south and east; the Nahris 18 in Ghaziabad; the Suranj clan hold 17 in the Meerut tahsíl, and the Khokhars have 14 villages in Bágpat. The remaining clans, with the number of villages they hold are as follows:—

Dánkar,	...	13	Khadu,	...	1	Sahlot,	...	3
Dankar,	...	8	Ihogád,	...	3	Karbar,	...	1
Ghatwála,	...	3	Ujlán,	...	3	Bálain,	...	1
Panwár,	...	13	Kakrán,	...	4	Khebon,	...	1
Dholiau,	...	1	Jákhar,	...	1	Galsat,	...	7
Kondu,	...	2	Ponra,	...	3	Pabariya,	...	1
Lánkra,	...	2	Ahláwat,	...	9	Sálagwán,	...	1
Mán,	...	2	Jarána,	...	1	Darár,	...	6
Nain,	...	6	Bhágri,	...	3	Naulaya,	...	1
Chakára,	...	4	Tahala,	...	3	Bírwál,	...	1
Saroha,	...	3	Barhán,	...	2	Chálial,	...	1
Puniya,	...	7	Kájli,	...	2	Gotyál,	...	1
Heri,	...	2	Kulkul,	...	3	Moras,	...	1
Során,	...	4	Ganthwára,	...	1	Jáwar,	...	1
Dháka,	...	9	Mahájal,	...	1	Bola,	...	1
Dáhima,	...	14	Pási,	...	1	Bahál,	...	2
Bhara,	...	2	Sadheri,	...	2	Dandán,	...	4
Malak,	...	11	Jangála,	...	1	Kámbar,	...	1
Udiáyan,	...	3	Salahu,	...	4	Sabháran,	...	4
Garak,	...	1	Dhalwán,	...	6	Konta,	...	1
Hora,	...	4	Siláh,	...	2	Bhatiyán,	...	2
Kharkhar,	...	1	Mandhar,	...	1	Soraj,	...	3
Kachhwáha,	...	1	Rodwál,	...	1	Dhángi,	...	1
Dúdwál,	...	1	Tahilar,	...	4	Halerahna,	...	1
Káli,	...	6	Galiya,	...	4	Masúli,	...	2
Ghanghas,	...	6	Bhainsla,	...	4	Baja,	...	1
Kandráyan,	...	2	Mohariya,	...	2	Chákláu,	...	1
Mávi,	...	1	Sebak,	...	1	Májra,	...	1

Amongst these 92 names there are several taken from clans of Rajpúts, such as Dánkar, Panwár, Dáhima, Kachhwáha, Bágri, &c., others from names of places or persons, while the name Jangála reminds us of the Mlechcha tribe of that name in the Pauránik geography. Of the villages given above, 151 are

situated in the Bágpat tahsíl, 49 in Mawána, 37 in Sardhana, 105 in Hápur, 86 in Meerut, and 60 in the Ghaziabad tahsíl; total 488.

History.

There is no tribe in these provinces whose history has given rise to more conjecture than the Játs.[1] According to their own account they are the descendants of the marriage of Rajpúts with women of an inferior class, and in this manner they account for the names of the Rajpút tribes amongst their own clans. The local story makes the Játs of Meerut the descendants of one Jaswant Singh. Others derive the name from the *játa* or hair of Mahádeo, or that they are the descendants of the great Jádu race. Those who do not regard themselves as natives of India trace their origin to the north-west, and give Garh-gajni or Ghazni as their old abode, which may be Ghazni in Afghanistan, or the old city of Gajnipur near Rawal Pindi. In the Panjab the Játs form nearly one-half the population of the various duábs from the foot of the hills down to Multán, and nearly four-tenths of the entire population. West of the Ravi they are nearly all Musalmáns. In Bharatpur (Bhurtpore) and Biána the Játs are also numerous, and here the Hindu section point to Kandahar as their parent country, while the Musalmáns adhere to Garh-gajni. General Cunningham identifies them with the Xanthii of Strabo and the Iatii of Pliny, and derives their origin from the country of Zotale on the Oxus. He places them in the end of the seventh century in Sindh, and identifies them with the Zaths, who plundered the army of Mahmúd on their return from Somnáth. Though there is a strong presumption that the Scythian Iatii of the classical writers are identical with the Zaths of the early Musalmán histories, and that the latter are the ancestors of the Játs of the present day, yet many authorities lean to the account given of their origin by the Játs themselves, that they are the offspring of mixed marriages, and of Aryan, not Turanian, descent[2].

Chauháns.

A degraded Rajpút tribe calling themselves Chauháns are found in the Duáb and Rohilkhand. They hold eighteen villages chiefly in the Bágpat, Meerut, and Ghaziabad tahsíls. They are not regarded as Kshatriyas, and do not intermarry with Rajpút clans. They stand in the same relation to Kshatriyas as the Játs and Gújars, and in common with the Já'ts, *karáo* (or concubinage) is lawful amongst them, and the

[1] See Beames' Elliot, I., 130; Cunningham Arch. Sur., II., 3, 53; Lassen's Bactrian Coins. They are identical with the Jats [Juts] of the Panjab.

[2] It is impossible to follow up these speculations here, or to enter into a discussion as to the connection of the Játs with the Massa Gete or great Getæ and Sakæ Scythians, who were essentially the same as the Dah (Dhe?) Scythians, all of which belonged to the great tribe of Sus or Abars. The reference to General Cunningham's, Lassen's, and Sir H. Elliot's works contain most of the arguments on both sides of the question. The Játs undoubtedly entered the upper Duáb from the Panjab; the Heles probably about the tenth to the twelfth centuries, and the Dhes within the last 150 years.

offspring of such connection is legitimate. Their principal *gotras* are Antal, Kachhwáha, Chauhán, Tanwár, Bariyán, Lakha, Mahadwár, Makhláchha, and Bahal. Six of the twelve Káyath *gotras* are represented in this district: the Máthur, Bhatnagar, Sribástab, Kulsreshta, Saksena and Anvashta. They are, however, of little importance either for intelligence, wealth, or numbers. The Kulsreshta clan holds 15 villages.

Káyaths.

The Gújars are more numerous in this district than in any other in these Provinces, numbering 60,350 souls. Next comes Saháranpur, Bulandshahr, and Muzaffarnagar. In Rohilkhand they number over 10,000 in the Moradabad and Bareilly districts. They appear again in strength in Agra and Jalaun, and have a considerable colony in the jungle tracts of Mirzapur. Altogether they number over a quarter of a million in these Provinces. In the Panjab they are chiefly Musalmáns. The Gújars are of very unsettled habits, and much given to cattle-lifting and a life of plunder. Their favourite home in this district is in the jungle tracts in the *khádirs* of the Jumna, Hindan and Ganges, where the rough, uncultivated wastes afford them good pasturage for their cattle. During the latter half of the past century and the first quarter of the present century there were several powerful Gújar chiefs in this district, but their possessions have been much reduced during the old settlements. Their most influential clans are the Bainsla, Kasana, Máwi, Bágri, and Dede. At the end of the last century Jít Singh, Gújar of Parichhatgarh, was one of the most powerful Hindu chieftains in the district. In the time of Raja Guláb Singh Bahsúma became the head-quarters of the Gújar confederacy, and continued so until the union of the Landhaura and Bahsúma estates. The Gújars have zamíndári possessions in 209 villages. The Bainsla clan hold 16 villages, Kasana, 15; Khobra, 16; Máwi, 30; Bágri, 34; Dede, 20; Morbal, Boswál, and Motli, 5 each; Karána, 4; Dáhima, Hon, Bháli, and Jobar clans, 3 each; the Khúbar, Adhána, Tábri, Múndán, Badhána, Gotár, Máhila, Goli, Chandela, Bhadána, Chhokar, and Chatrána, two each, and the Bhadrána, Dhandel, Sarsat, Chander, Magori, Jindhár, Kahári, Yona, Tongar, Dála, Bhadára, Ráthi, Pilwán, Mámri, Bapau, Rajwán, Tanwar, Saralna, Dahra, Sukal, Ráhtor, Básarti, and Kalsiya clans one village each. The increase of cultivation in the Gújar villages through which the canal passes has been a subject of remark of late years, and with this change to agricultural life a marked improvement has taken place in their character. It is said of those inhabiting the upper slope of the Jumna that "they have improved fifty per cent. since the mutiny." Their character is now very different from that of their brethren in the lower valley, who still adhere to their hereditary occupation of cattle-lifting. This habit is much fostered by the unsteadiness arising from their profession of grazier. Of the villages mentioned above, 12 are situated in the Bágpat tahsíl, 81 in Mawána, 6 in Sardhana, 23 in Hápur, 31 in Meerut,

Gújars.

and 56 in Ghaziabad; total, 209. The Gújars and their history have been noticed under the Saháranpur district.

Tagas.

The Taga tribe is one of the most numerous in this district, and is confined to the Saháranpur, Muzaffarnagar, Bulandshahr, Moradabad, and Meerut districts. A few scattered members are found in other districts, but they are inconsiderable in both numbers and importance. Their most powerful clans are the Mítwál, Gaur, Dikhit, Pásbán, Maheshwára, Debán, and Sándlas. In Bágpat there is a tribe of Tagas, called Chúlat or Chúla, who are said to have come from Chháta or Chára, on the eastern borders of Bikanír; a well known division of Tagas is into Bísa or full caste, and Dasa or half caste. The Dasas, entered separately in the list to the number of 574, probably belong to the latter division, in which the marriage of widows is allowed. The name Taga is said to be derived from the words "*tyágdana*," "to give up." One story has it that in the reign of Parikshit, king of Hastináp̃ur, the snakes attacked the city, and notwithstanding that Parikshit retired into the middle of the Ganges to avoid them he was bitten and died. His son Janamejaya resolved on the extirpation of the great snake race and summoned Brahmans from all quarters to aid him. Amongst these the Tagas, who also call themselves Gaur Tagas, came in great numbers from the south, probably from Gonda, in Oudh. Preparations were made for a great *hom* or sacrifice, and all the Nágas were slaughtered except Takshak and Vásuki, who were saved at the intervention of a Brahman. In reward for their aid on this occasion the Raja bestowed on each of the Brahmans present a grant of a village within the *pán* leaf distributed with *atr* at the close of the ceremony, so that they became cultivators of the soil and gave up their position as Brahmans. Those who refused the grant and continued Brahmans retired to Hariána, whilst the Tagas settled down about Hastináp̃ur, whence they emigrated and took possession of the neighbouring parganahs. With few exceptions, all the Tagas in this district claim descent from the Gaur Brahmans. Another legend makes them descendants of one Iswar Bhát, by a prostitute, in the reign of the same Raja, but the traditions of all tribes in the district declare them to be the degenerate descendants of a Brahman stock, who were in possession of the district as cultivators long before the arrival of the Játs from the west. Retreating before the Játs and Gújars, the Tagas abandoned the north-western parganahs where those warlike tribes first settled, and are now chiefly found in the parganahs to the south of the district. The Hindú Tagas are zamíndárs in 289 villages. The Mítwal *gotra* hold 46 villages in tahsíl Ghaziabad, the Dikhits have 19 in the same tahsíl, and the Gaurs 11; the Pásbáns possess 55 villages and the Debáns 18 in the Hápur tahsíl, and the Sándlas have 22 villages, chiefly in the Sardhana tahsíl. The Maheshwáras have 12 villages, all but one lying in the

Taga landowners.

Mawána tahsíl, and the Kausik clan possess 11 villages in Bágpat. The remaining clans of Hindu Tagas, with the number of villages they occupy, are as follows:—

Dichit,	...	...	...	1	Gúrpa	...	...	...	2
Basyán,	...	...	...	3	Vasisht,	...	...	...	4
Sarsút,	...	...	...	11	Káugrán,	...	...	...	1
Karas,	...	...	...	1	Bachchas,	...	...	...	5
Bhanwál,	...	...	...	1	Bhá addhvaj,	...	...	...	6
Bháti,	...	...	...	3	Kashab,	...	...	...	7
Gújara,	...	...	...	3	Matras,	...	...	...	4
Atras,	...	...	...	2	Bhand,	...	...	...	2
Tongar,	...	...	...	6	Bhártdwári,	...	...	...	5
Galsan,	...	...	...	7	Arlas,	...	...	...	2
Bhansaut,	...	...	...	1	Dablán,	...	...	...	6
Dhakwán,	...	...	...	1					

Of these 43 are situated in the Bágpat tahsíl, 31 in Mawána, 23 in Sardhana, 94 in Hápur, 10 in Meerut, and 88 in the Gháziabad tahsíl. Musalmán Tagas hold 46 villages. The Bainsán *gotra* have two and the Basyáns four villages in Gháziabad, and the latter one also in Mawána. The Maheshwára possess 21 villages in Mawána and 7 in Hápur, where also the Musalmán Galsans have two and the Musalmán Pásbáns four villages. Neither the Hindu nor the Musalmán Tagas are good cultivators, but it is said that their condition in this respect is improving, and when brought into competition with the Játs they improve by the example shown them.

Ahírs.

The Ahírs are for the most part found in the Bágpat tahsíl. Sir H. M. Elliot writes:—"The only districts which in the *Ain-i-Akbari* are said to have Ahír zamíndárs are Nagína and Sardhana." At the present time there is not a single Ahír zamíndár in the Sardhana tahsíl. Among the Ahírs in this district the Desswáls of Bágpat are the most numerous, holding 15 villages out of the 44 possessed by the tribe. The Bhadána and Dogri clans hold two each; the Náhariya five; the Satariya and Karoya four each, and the Jarwál, Bhalol, Ládhi, Jariya, Dáhima, Karwa, Chúsba, Bariyán, Buháuiya, Bhalán, Tanwar and Jútbáya clans, one village each. There are 23 villages in the Bágpat tahsíl, 8 in Mawána, 5 in Meerut, and 8 in the Gháziabad tahsíl; total, 44. The Ahírs are widely spread all over these provinces, and are in a position somewhat similar to that of the Gújars and Játs. Some connect them with the Abhiri of Ptolemy.

Mewátis or Meos.

The Musalmán Mewátis or Meos are not mentioned in the census of 1872. They hold two villages in the Hápur tahsíl. The Dhagal clan of Hindu Meos also hold one village in the Gháziabad tahsíl. In earlier times they were a very powerful tribe in the northern Duáb. It was in a great measure due to their exertions that the Gahlots succeeded in dislodging the Dors from Bulandshahr and the south of Meerut. In return the Meos were permitted to appropriate large estates in the conquered country. They were, however, always turbulent and unmanageable, and are

frequently mentioned by the Persian historians. As early as 1241 A.D. they gave considerable trouble to the Musalmán rulers of Dehli. In that year we read in the *Tabakát-i-Nasiri*, that Ulugh Khán[1] inflicted a severe chastisement "on the *Mawás* of the Duáb between the Ganges and the Jumna. He fought much against the infidels and cleared the roads and neighbouring country from insurgents." A similar expedition was organized in 1249 A. D., and in 1259 Ulugh Khán exercised his horsemen by making war upon the Mawás while awaiting the attack of the Mughals from the west. For a long time the Meos remained in peace until the accession of Ghaiyas-ud-dín Balban in 1265 A. D., who employed himself in harrying the jungles in which they concealed themselves. The historian Zia-ud-dín Barni writes that the turbulence of the Mewátis had increased to such an extent that they used to plunder the houses in the immediate neighbourhood of Dehli itself. To such a pitch had their daring extended that it was found necessary to close the western gates of the city at afternoon prayer. The Sultan spent a whole year in his expeditions against them, and built forts and posts to protect the city from their incursions. In this campaign 100,000 of the royal army were slain by the Mewátis according to Barni, but more probably the same number of the enemy were slain as Firishta says. In the reign of Fíroz Sháh the tracts occupied by the Meos in the Duáb were known as Mawás, and from their wild and rugged character the word occasionally became synonymous with a fastness or place of strength. Thus we read[2] that Malik Chhaju, on his defeat by the royal forces, escaped into a Mawás; again the defeated army of Aín-ul-mulk "fell into the hands of the Hindús of the Mawás." In both these cases, referring as they do to the Duáb, the tracts occupied by the Meos appear to me to be intended. In 1426 A.D. also we read that Mubárak Sháh crossed the Jumna and "attacked the village of Harauli, one of the well-known places in Mawás." The expedition of Balban is not forgotten in this district, and to it is attributed the expulsion of the Meos from Meerut. They are now to be chiefly found in Bulandshahr, Aligarh, and Budáun, and still bear the same character for violence and love of plunder that seems to have adhered to them from their earliest days. They are the principal dakaits of the present day not only in our own Provinces but all through Rajpútána.

Gaddis.

The Gaddis or Gadhis or Gadahlas are a small tribe resembling the Ghosís, and for the most part Musalmáns. They have a few scattered communities in Garhmuktesar, Saráwa, Hastináp ur, Kithor, and Meerut. They are zamíndárs of six villages, of which four

[1] Dowson's Elliot, II, 362. Professor Dowson seems to be in some difficulty as to the meaning of the term Mawás, but it can only refer to the Meos, whose power at this time is sufficiently clear from local history. See further II, 379: III, 104, 138, 249, and IV, 63.

[2] Dowson's Elliot, III, 138, 249.

are in pargaṅah Meerut, one in parganah Hastinápur, and one in Saráwa. The Hindu Kambos of the Chaupár clan have two villages in the Meerut tahsíl,

Kambos.

and the Musalmán Kambos possess eleven villages, of which five are in Gháziabad, three in Meerut, two in Sardhana, and one in the Mawána tahsíl. The Rawas hold 17 villages in this district distributed among the following *gots*:—Lepán, 1; Során, 1; Káliyán, 1; Kánra, 2; Yona, 5; Deswál, 1; Chauhán, 5, and Bágri, 1. Six of these are situated in the Bágpat tahsíl, six in Sardhana, and one in Meerut. Bohras or Bhoras hold four villages in Bágpat, of which two belong to the Bokal clan and two to the Párásar clan. The Báhal clan of Khattris hold five villages in Gháziabad; the Mahár clan of Kahárs possess two villages; the Nángal clan of Málís, five villages; the Rodarbáni clan of Gosháins, two villages; Giri Gosháins, three; Nánakshábi Gosháins, two; and Charandási Gosháins, two villages.

Rawas.

The Muhammadans number 281,857 souls, of whom 134,101 are females. They are divided into Shaikhs, numbering 181,106, with 86,137 females; Sayyids, 7,729; Mughals, 2,366; Patháns, 19,117 (9,307 females), and unspecified 71,539 (33,670 females). The Shaikhs of the Meerut district divide themselves into seven classes:—(1) Sadíki, the descendants of Abu Bakr; (2) Farrúkhi, descendants of Umar; (3) Usmáni, descendants of Usmán; (4) Mardáni, descendants of Muhammad; (5) Answári, the same; (6) Nabi, the same; and (7) Kuraishi, considered the highest of the seven classes. It need hardly be said that the great mass of the Shaikhs are descendants of converted Hindús. The Shaikhs possess 49 villages; the Afgháns and Mughals hold 42; Sayyids, 119; Mírs, 7; Bilúchs, 5; and Kasábs, 1. These are in addition to those already noted as in the hands of Nau-muslims and the Musalmán divisions of Hindú tribes. Altogether 337 villages are held by Musalmáns in this district. The first application of the term Nau-muslim was to the Mughal converts who remained about Dehli after the departure of Abdullah, grandson of Huláku, in 1292 A.D.

Musalmáns.

Amongst the non-Asiatic inhabitants, the last census showed that 942 natives of Great Britain resided in the Meerut district. There were 8 French, 3 German, 6 Italian, 11 Portuguese, 3 Swiss, and 1,176 European inhabitants whose nationality was not specified; total Europeans 2,149. The Eurasian inhabitants numbered 142 souls. Amongst foreign Asiatic nations residing in the district were 18 Afgháns, 3 Armenians, 23 Kashmírís, and 25 Nepalese. Amongst landholders, Englishmen hold 24 villages in the Gháziabad tahsíl, three in Mawána, and one in Bágpat; Frenchmen hold five villages in Bágpat, and an Arab has one in Sardhana.

Other nationalities.

[1] Dowson's Elliot, III, 147.

Distribution of the castes according to cultivation.

The following statement shows the distribution of the population per each cultivated square mile and the proportion of the principal castes in each parganah of the district. The Chamárs form the great mass of the labouring population in every parganah, and in the whole Province number one-eighth of the entire population, being found in large numbers in every district :—

Parganah.	Cultivated area in square miles.	*Distribution of the principal castes per cultivated square mile.*						
		Rajpúts.	Tagas.	Játs.	Chamárs.	Gújars.	Other castes.	Total.
Bágpat, ...	154	30	30	81	78	53	430	702
Baraut, ...	62	1	8	236	110	12	540	907
Chhaprauli, ...	45	5	...	246	96	12	490	844
Kutána, ...	56	4	15	243	86	...	476	824
Loni, ...	97	26	46	21	114	101	373	681
Barnáwa, ...	79	3	4	213	94	20	488	822
Meerut, ...	260	36	9	93	179	38	700	1,055
Pána, ...	97	129	8	38	120	14	528	837
Jalálabad, ...	144	11	73	99	108	23	419	733
Hápura, ...	122	36	31	80	115	33	468	793
Sardhana, ...	104	80	33	64	94	2	515	788
Garhmuktesar, ...	63	25	26	42	129	32	425	679
Saráwa, ...	56	13	94	18	117	37	386	665
Púth, ...	38	138	...	24	102	5	367	636
Hastinápur, ...	121	23	8	57	139	74	322	622
Kithor, ...	126	5	25	34	106	57	329	556
Total, ...	1,630	34	26	89	121	37	474	781

Occupations.

Perhaps no more important facts can be gleaned from the recent census than those relating to the occupation of the people. The broad distinction of agriculturists and non-agriculturists has always been observed in all the enumerations that have taken place in this district. In 1847 the proportion of the population engaged in agriculture was given as 392,109 souls, or 45 per cent., of the total population : in 1853 the records show 510,135 souls, or 45 per cent, and in 1865 the numbers were 521,890, or 43 per cent. of the total population. The census of 1872 on this point is more explicit and gives materials from which a correct idea of the occupations of the 1,273,914 souls inhabiting this district may be obtained. Taking the same broad distinction, we have in 1872 an agricultural population numbering 537,230 persons, or 42·2 per cent. of the total population. Of these 445,700 were Hindús, or 35 per cent. of the entire population, and 91,414 were Musalmáns, or 7·2 per cent. Divided into the two classes of landowners and cultivators, the census

Agriculturists.

shows 232,583 (104,860 females) under the former class and 324,647 (136,455) under the latter class. The Hindú landowners numbered 106,182 males and 84,623 females, while the Musalmáns showed 21,539 males and 20,237 females. The Musalmán cultivators are set down at 49,638 (23,474 females). On the total agricultural population the male adults (above fifteen years of age) number 184,916, consisting of proprietors of land, 79,203; cultivators, 105,258; ploughmen, 247; gardeners, 107; singhára-growers, 47; and indigo-planters, 46. To complete the return of those dependant upon the land, as distinguished from other occupations, we should add to the above 3,269 persons engaged about animals, and one-half the 58,656 males recorded as labourers, which would give a total of 217,513 adult males out of the district total of 428,682, or a little over one-half.

Occupations other than agriculture.

The agricultural comprises but one of the six classes into which the population was divided at the recent census. Taking the remainder in order, and remembering that the figures refer only to male adults, the following facts may be gleaned. The first or professional class numbers 10,319 members, amongst whom are classed Government servants; the learned professions, art, &c., as family priests (6,217), pandits (645), school-masters (227), druggists (159), doctors (232), singers and musicians (392). The second or domestic class comprises 53,457 males engaged in entertaining and performing personal offices for men, such as inn-keepers, personal servants (24,150), washermen, cooks, table-attendants, water-carriers (7,476), and sweepers (13,475). The third or commercial class gives 36,078 males, and includes all persons who buy or sell, keep or lend money or goods of various kinds, as merchants (1,480), shop-keepers (17,043), money-lenders (3,491), and the like; also persons engaged in the conveyance of men, animals and goods, as porters (8,850), coolies (1,584), ekka-drivers (281), &c. The fourth class is the agricultural already noticed. The fifth class numbers 67,761 males and embraces all industrial occupations, including those engaged in arts and mechanics, as painters (471), patwas or necklace-makers (220), saddlers (309), masons (693), carpenters (4,281), weavers (16,676), tailors (3,471), shoe-makers (3,842), &c.; all persons engaged in the manufacture of food and drink, as grain-parchers (1,167), confectioners (750), green-grocers (962), butchers (948), &c., and all dealers in animal, vegetable, or mineral substances. In the sixth and last class the indefinite and unproductive classes are arranged. They number 72,882 males amongst whom 58,656 are set down as labourers and 1,222 as excavators: beggars number 11,986, and form the greater portion of the class supported by the community at large. The population is essentially rural. There are only fifteen towns having a population exceeding 5,000 inhabitants, and the different non-agricultural classes are chiefly found in the villages in the interior of the district.

Panchâyats.

The *panch* or local indigenous tribunal is hereditary, and, as a rule, new men are neveradmitted except when the hereditary ones are notoriously unfit for the duty. The new members are always men of wealth and influence. Panchâyats are held on private affairs, such as caste, family customs, relationship, private quarrels, and not unfrequently for the decision of criminal cases. The Nâi or barber is employed to summon the parties, and when all are assembled the president *(sar-panch)* or umpire is appointed. The complainant first tells his story, and after that the defendant replies. Then the decision is given in accordance with the votes of the majority. In cases of want of unanimity the decision is sometimes put off from time to time. In villages these panchâyats sit in the *chaupâl*, and in cities in *mandirs* and *shiwâlas* (temples). Sometimes among the lower classes, on annual holidays, the people put in their complaints, and the assembled members of their caste decide the case. A frequent punishment inflicted by a panchâyat is expulsion from caste *(jâti jî ka maut)*.

Chaudhris.

A Chaudhri or head of a trade or profession was formerly appointed by Government, but this practice has long ceased to be followed. The people now choose their own Chaudhris, and the post is usually hereditary. Frequently, however, in cases of great dissatisfaction the Chaudhris are displaced and new ones elected. Sometimes Chaudhris are found useful in emergencies when the Government requires certain work performed, but they are never able to collect many people together from their trades without pressure from some Government official. Privately the Chaudhris decide the disputes that arise in their own barâdari or guild, as at weddings, mournings, and when a member has so committed himself that he ought to be ejected from his caste. In large bazars the chief officer is called *chaukrâyat*; he stands with regard to the shopkeepers in the same position as a Chaudhri in relation to a trade. In large bazars, too, the weighmen are important personages, and have as perquisite a pice in the rupee on all grain sold *(tolâi)*. In cities where many Brahmans live, as in Meerut, they form themselves into parties called *tharas*, each of which is presided over by a *sirdâr*, who performs the same duties as a Chaudhri.

Food of the lower classes.

Labourers in this district take food usually but twice a day, once in the early morning and again in the evening. Their food is generally maize, *bâjra*, *joâr*, and barley, and when wheat is cheap that also. From a half to two-thirds of a ser is considered a fair meal for an able-bodied man. Petty traders eat similar food, using more wheat the better their circumstances, and by the addition of *dâl* (split pulse) making up various dishes. The average price of barley is 26 sers per rupee, of maize 35 sers, of *bâjra* 34 sers, of *joâr* 36 sers, while the average price of *dâl* is three quarters of an anna the ser. The higher and well-to-do middle classes make gram, rice and wheat their chief food, seasoning their dishes with *ghî* (clarified

butter), spices, turmeric, &c. Two of the most favourite dishes amongst the middle classes are *kachaui*, compounded of *urd dál* and fine flour, and *khichri*, which is a seasoned dish of *múng dál*, *bájra* and other grains boiled with rice. Fish are eaten by the lower classes everywhere among Hindús. Brahmans, Játs, Gújars, and Baniyas (orthodox and Jains), however, do not eat fish. Among the better classes this article of food is consumed by Káyaths and Bengális; Europeans and Musalmáns too are large consumers. In the early part of the hot weather large quantities of cucumbers *(kachra)* and melons (*tarbuza* or water-melon, and *kharbuza* or musk-melon) are consumed by all classes. In villages younggram and mustard leaves are eaten, and potatoes everywhere by the well-to-do classes. The *sankúkra*, or fruit of the *san* plant, is a favourite vegetable; so also carrots *(gájar* or *zardak)*, and among the wealthy classes the *kanwal-kakri*, or root of the lotus. European vegetables are gaining ground and are now found growing in the neighbourhood of most large towns. In the Bágpat tahsíl, even so far removed from the residence of Europeans, 55 acres of onions were grown in 1871. Among the grains eaten by the lower castes, especially Kahárs, are *sanwak* and *pusái*, which grow spontaneously, and *mandwa*, a very cheap grain.

Habitations.

In villages houses are very rudely constructed. As a rule *gárá* (mortar) or *gonda* (moistened earth) are piled up in the shape of walls and plastered outside and inside with a composition of cow-dung and earth mixed. Beams are thrown over and a straw roof laid on. This is a house or *ghar*, and some four or five *ghars* formed into a court are the *ihátah* or enclosure. According to the size of the houses there are the *dálán*, *kotha*, *kothri* (or store-room), and *dobári*. In villages the *kotha* generally has two *kothris*, and the verandah with its *chhappar* or straw roof is called the *dálán*. In towns the *dálán* is usually a large room with some two, three, or four doors. The size of a village house varies considerably, but the average dimensions are 20 feet by 10 feet, and on an average nine persons live in one *ihátah*. The upper classes in town and country build their houses of brick and mortar, and they generally have eight or nine rooms. As a rule, in villages, one family lives in one room *(kotha.)* The gate or door of the *ihátah* is called *deorhi*, and usually in front of this is built a small *chabútra* (or platform) corrupted in village parlance to *chauntra*. Here the inhabitants of the *ihátah* lounge and smoke. The Gújars have fewer houses in each *ihátah* than Játs and Ahírs. Moreover, these people have not wooden doors, but only bambu gratings such as are seen in cattle-sheds, called *khiraks*. The lower castes as Chamárs and Chúhras frequently live in straw *páls* called *raotis*: this is called a *doohhanna chhapar*; in many villages a whole family lives in one such hut. Occasionally a great number of these are huddled together with a courtyard in the centre, which serves the same purpose as a *chaupál* among the higher castes, and a cow-fold

as well. As compared with village houses, town houses are usually deficient in width and the courtyards are smaller. Gararíyas and Nats (jugglers) usually live in huts made of the part of the *sarpat* grass called *sirki:* hence the generic name *sirkiyalog* applied to these classes. The statistics of the house enumeration have already been given. There are no buildings of any noted architectural merit in this district. Those in the city are noticed in the article MEERUT. The Hindú temples are all small, containing the sanctuary only, which is a conical chamber scarcely lighted by one small door, at which the worshipper presents his offering and offers up his supplication. The temples are called Shiwálas, Mahádewas, and Thákurdwáras. Opposite the sanctuary door is the stone saucer, *argha* or *jaleri*, in which the stone representing the Shiva ling called *pindi* is placed. Placed round are the *artis* or censers in which the Hindú worshippers put oil and wicks of cotton, and which they slowly move before the image while saying their prayers. This ceremony is gone through once every day by all zealous Brahmans, and on Mondays often twice, once in the morning and once in the evening. This is the end of their service, and is followed by a sermon or *katha* from the attendant pandit. Other properties laid up in the temple are the *ghanta* (large bell); the *ghariya* (small bell); *jhanjh* (cymbals); *sank* (conch shell); *achmani* (the small spoon used in the ceremony of rinsing the mouth); the *sampati* (small vessel in which the Hindús put their offerings), which lies before the *sinhásan* or throne on which the idols recline. Suspended are the lamps *(dípak)* to lighten the sanctuary, and the *dhúpdán* (or censer) in which the incense *(dhúp)* is burnt. In the Jain or Saraúgi temples, which in this district are found inconsiderable numbers, Parasnáth is worshiped under the form of a kind of iron cross. The rest of his worship is very similar to that of Shiva. There are also a few Devi temples. Here Devi is worshipped twice a year, and fairs are held at the same time. Rice, sweetmeats, flowers, &c., are offered up, and worship continues for several days. The chief service is held in *Jeth.*

Temples.

There are no settlements of the Bráhma Samáj in the district. Christian missionaries early settled here among the town and rural populations, and there are at present eight Church Mission Stations:—

Religion.

Name.	When entered upon.	Number of Native Christians.	Average attendance of pupils in school.
Meerut, ...	1816	264	194
Kankarkhera and Maliyána, ...	1558	82	54
Ikla and Ghaziabad, ...	1862-69	83	22
Mawána and Hápur, ...	1864-67	...	Unoccupied.
Pilkhua, ...	1863	7	...

The census of 1872 gives the number of Native Christians as 730. These statements clearly show how slow the progress of Christianity has been after the unremitting labours of more than half a century. The Christians of Ikla were originally Chamárs of Aghwánpur. Why they left Aghwánpur is not quite clear. The zamíndárs point out that they were guilty of some undefined offence which necessitated their expulsion from the village. The Christians themselves say they were so persecuted that when an opportunity of settling elsewhere presented itself, they were glad to avail themselves of it, and their statement is probably correct. All the tahsíldárs agree that the condition of the Native Christians has improved since the adoption of their new religion. From the condition of Chamár serfs they have become a tolerably respectable body of masons and small agriculturists. But the system that places the secular affairs of a Christian settlement under the management of the pastor has in a great measure destroyed the independence of the converts. This has been the case at Ikla. The Church Society has sent money, and the Christians, always looking upon themselves as a privileged subsidised race, have become more and more idle, failed to pay their rents, and then borrowed money at a high rate of interest. The Church Society now finds it necessary to withdraw pecuniary support, and in all probability the settlement will collapse. Connected with the Dehli Mission is the Shahdara Christian settlement. The converts there are labourers, shop-keepers, and shoe-makers. Originally they were Chamárs.

Sardhana.

There are about 250 Native Christians at Sardhana, the descendants of those who embraced Christianity in the time of the Begam Sumru, and persons who became proselytes to Christianity during the famine of 1860-61 and 1869. The Christians were all originally low-caste Hindús, and Mr. Thornton has very unjustly held them up as a notoriously idle and profligate race. Such is not the case, for they are an orderly people and in every way infinitely superior to their own former fellow-castemen. The Roman Catholic priests work hard for their little colony, and are greatly revered and respected. At St. John's College some of the boys are instructed for the priesthood, and others taught to read and write the Nágari and Urdu characters. The instruction for the priesthood is peculiar. There are some twelve little native boys who can quote whole chapters of the Latin Bible and nearly all the prayers of the Missal. Those who cannot sympathise with the system must admire the patience and devotion of the Italian priests who have put themselves to the trouble of imparting such instruction. The majority of the Christian population here are cultivators and weavers, while many are the pensioned descendants of the European servants of Begam Sumru, and still bear the appellation of Sáhib and Mem Sáhib.

Muhammadan religion.

The Muhammadan religion is making no further progress among the people, and Hindú converts to Islám are now as rare as those to Christianity. The Sunnis in this district are more numerous than the Shiahs, though the latter are a most influential minority. The sectarian hatred that exists elsewhere between these co-religionists is here little felt. Wahábi tenets are said to be rapidly gaining ground among the Sunnis, while the Shiahs are as yet scarcely affected by the revival. There is very little fanaticism among the Musalmáns of this district, and, as a rule, they are miserably poor. Many fine estates have within the last few years passed from Musalmáns into the hands of the Hindú money-lenders, who are fast becoming the largest landed proprietors of the district. This is much to be regretted, for as a rule Musalmán gentlemen are easy landlords and their tenantry are a contented people.

Education among the people.

Under the Government system education is making rapid trides among the people, notwithstanding the objection to education generally professed by most of the Játs and the Musalmán dislike to the practical knowledge taught in the Government schools. The educational arrangements in this district are under the supervision of the Inspector of the 1st Circle, in concert with the Local Educational Committee, presided over by the Judge. The first step towards inaugurating a sound system of village schools was taken in 1845, by the issuing of instructions for the collection of data as to the actual state of education in these Provinces. The results of this inquiry were embodied in a report, and on this action was so far taken that a number of village schools were established in 1848. It was found that the district then contained 164 Persian, 205 Hindi, 13 Arabic, and 28 Sanskrit schools; total, 410. Of Persian schools there were 47, in which the Kurán was read; of the Hindi 22, in which Sanskrit knowledge was imparted. In one school Arabic was taught by a Rajpút, and Hindi and Persian instruction offered in another by a Brahman. Among the Persian and Arabic teachers there were 170 Muhammadans, four Brahmans, two Káyaths, and one Rajpút. Among the Hindi and Sanskrit teachers, 204 Brahmans, 5 Káyaths, 20 Muhammadans, four Jogis, and one Bairági. Of the pupils throughout the district 873 were Muhammadans, 911 Brahmans, 112 Rajpúts, and 117 Káyaths. The course of instruction in the Persian school embraced the reading of the works commonly used in native schools. In the Hindi schools it was confined to agricultural and commercial accounts. The total number of pupils in the district was but 3,798. Considering the number of male children fit for instruction to be one-twelfth of the total population, it was found that of these only five per cent. attended school.[1] The number of pupils in Government schools alone now exceeds the total number of pupils in the district in 1847-48. Working on this

[1] Thornton's Memoir, p. 34, Calcutta, 1850.

foundation the village schools rapidly increased, tahsíli schools were opened in 1856, the new village schools in 1858-59, and the Meerut zila school in 1867. The last has now a fine building at its disposal, for which the Government sanctioned an expenditure of Rs. 20,000. The normal school at Meerut was opened in 1859 for training teachers for the vernacular schools of the circle, and affords a year's instruction gratis to each student. There is an aided school at Ghaziabad belonging to the Dehli P. G. Society for the children of railway employés. There are also aided schools at Baraut and Hápur, the Meerut citizens' school, which is in part supported by the municipality, and the Church Mission school. Among the well-to-do classes it is usual to entertain a private tutor for the education of the sons, and from the very mixed company met with in the Government schools it will be long before they become popular. Amongst the lowest classes of Hindús and Musalmáns there is little education, and there are few who can do more than with difficulty decipher the Nágari character. The monthly salary of a Government village, circuit, or halkahbandi teacher is Rs. 6, 9, 12, and 15, according to his grade. In 1847-48 his average pay was only Rs. 2, 3 a month.

Present statistics.

The following tables give the educational statistics of the whole district, according to the returns of the Department of Public Instruction, for 1860-61, 1871-72, and 1874-75 :—

	Class of school.	1860-61.			1871-72.							
						No. of pupils.						
		No. of schools.	No. of pupils.	Cost.	No. of schools.	Hindús.	Musalmáns.	Others.	Average daily attendance.	Cost per head.	Proportion borne by State.	Total charges.
				Rs.						Rs. a. p	Rs. a. p.	Rs.
Govt.	Zila (inferior),	...	...	...	1	76	19	...	86	35 10 0	30 2 0	3,063
	Tahsíli, ...	7	466	1,935	6	288	98	...	303	5 6 0	4 7 0	2,026
	Halkahbandi, ...	128	3,259	9,618	164	3,737	898	...	3,246	3 14 0	1 15 0	16,642
	Female, ...	...	...	...	17	200	37	...	128	3 15 0	3 15 0	701
Aided.	Anglo-vernacular,	...	...	...	4	255	48	44	257	40 0 0	16 0 0	10,494
	Vernacular, ...	...	...	...	2	...	...	70	59	8 0 0	2 12 0	474
	Female, ...	...	...	...	2	39	...	10	43	30 0 0	15 0 0	1,306
Unaided.	Indigenous, ...	277	3,715	11,398	163	1,550	591	...	1,906	4 5 0	...	9,244
	Govt. Normal,	1	127	10,409	1	40	23	...	55	150 2 0	106 4 0	9,684
	Total, ...	413	7,567	33,360	360	6,185	1,714	124	6,083	...	...	53,634

Educational Returns of 1874-75.

Class of school.		Number of schools.	No. of pupils. Hindús.	Musalmáns.	Others.	Average daily attendance.	Cost per head.	Proportion borne by State.	Total charges.
							Rs. a. p.	Rs. a. p.	Rs.
Govt.	Zila (inferior), ...	1	116	122	...	159·06	19 12 0	19 9 0	3,149
	Tahsíli and pargana,	7	297	107	...	316·26	8 9 0	8 8 0	2,736
	Halkahbandi, ...	189	3,980	1,197	...	3,799·02	5 1 0	...	19,246
	Female, ...	11	186	17	...	140·85	6 8 0	6 8 0	918
	Municipal, ...	11	288	93	1	286·68	7 6 0	...	2,142
Aided,	Anglo-vernacular, ..	2	186	124	13	264·00	28 7 0	10 1 0	7,520
	Vernacular, ...	1	15	6	20	31·00	10 5 0	8 13 0	321
	Female, ...	2	46	...	12	42·00	34 3 0	5 11 0	1,438
Unaided,	Indigenous, ...	191	1,978	750	...	2,815·00	5 1 0	...	11,734
Govt.,	Normal school, (Male).	1	31	31	...	54·00	191 7 0	191 7 0	10,338
	Total, ...	416	7,123	2,447	46	7,407·87	...	...	59,542

Education according to the census.

In 1872 an attempt was made, for the first time, to register the literate (those who could read and write) according to sex, age, and religion. Though not to be considered trustworthy, yet as the first attempt in this direction the results must be noticed here. The following table gives the number of Hindus and Musalmáns who can read and write, and the percentages of the same to the total population of the same religion, sex, and age. The Christian population is so small that the returns affecting it have been omitted :—

Ages.	Hindus. Males. Number.	Literate.	Percentage.	Females. Number.	Literate.	Musalmáns. Males. Number.	Literate.	Percentage.	Females. Number.	Literate.
1 to 12, ...	185,131	2,479	1·3	147,149	10	51,140	708	1·3	43,888	...
12 to 20, ...	87,489	3,467	3·9	70,240	2	23,373	646	2·7	21,146	Nil.
Above 20 ...	264,568	14,672	5·5	236,649	5	73,243	1,975	2·6	69,067	...
Total, ...	...	20,618	...	...	17	...	3,329	...	...	...

These figures show that great room exists for the extension of education in this district. Taking all religions, only 1·3 per cent. of the male children up to

12 years are under instruction, only 3·7 per cent. of the male population between 12 and 20 can read and write, and only 4·9 per cent. of the population above 20 years of age. Female education is practically absent.

Printing presses.

There are thirteen printing presses in the district. Of these four are in cantonments—two regimental and two private. There is also one in the Central Jail, six in Meerut city, and two at Sardhana. The *Lawrence Gazette*, *Jalwatúr*, *Muir Gazette*, *Najm-ul-Akhbar*, *Akhbar Alam*, and *Meerut Gazette* are newspapers printed in Urdu at native presses in Meerut. The *Jagat Samáchar* is printed in Hindi. At Sardhana the priests print school-books for the use of their schools.

Language.

There are no peculiar dialects spoken in the district; the language in common use among the mass of the inhabitants is the ordinary Hindi, with an intermixture of Persian and Arabic. The language of servants in cantonments, known as '*bungalow bhásha*," is a curious mixture of bad Urdu, bad Hindi, and vilely pronounced English. Amongst the better class of natives the pure Urdu of Dehli is spoken, in a manner due to the closeness of Meerut to the imperial city.

Post-office.

The principal post-office is in Meerut cantonments, whence letters for the offices in the interior are daily despatched by runners. There are thirteen imperial offices, *viz.*, Meerut, Bágpat, Baraut, Binauli, Dásna, Gháziabad, Garhmuktesar, Hápur, Mawána, Murádnagar, Pilkhua, Shahdara, and Sardhana. The district dák offices number twenty-one, *viz.*, Bahádurgarh, Baleni, Begamabad, Baksar or Sakhera, Bahsúma, Chhaprauli, Dáha, Dhaulána, Daula, Daurála, Inchauli, Faridnagar, Gohra, Jáni, Khekara, Kharkoda, Kutána, Kumruddínnagar, Loni, Parichhatgarh, and Sháhjahánpur. The post-office statistics for three years during the last decade are shown in the following table:—

Year.	*Receipts.*						*Charges.*					
	Miscellaneous, savings, fines.	Passengers and parcels.	Deposits, guarantee funds, family funds.	Remittance.	Postage.	Total receipts.	Charges fixed and contingent, salaries, &c.	Mail service.	Remittances.	Other charges, refunds, advances, printing.	Cash balance.	Total charges.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1861-62, ...	420	60,858	10,660	28,329	16,141	1,16,408	25,293	1,925	71,479	17,868	73	1,16,638
1865-66, ...	149	...	5	37,406	19,147	56,707	18,065	19,229	19,262	13	137	56,706
1870-71, ...	497	...	10,836	36,314	16,735	64,382	17,478	4,196	26,845	15,551	312	64,382

In addition to the above, the receipts in 1860-61 from staging bungalows amounted to Rs. 1,016, and the expenditure to Rs. 785; the receipts for

service postage to Rs. 36,971, and the expenditure to the same amount, making a total receipts of Rs. 1,54,394. The returns below give the numbers of letters, newspapers, parcels, and books received and despatched during 1861-62, 1865-66, and 1870-71 :—

	1861-62.				1865-66.				1870-71.			
	Letters.	Newspapers.	Parcels.	Books.	Letters	Newspapers.	Parcels.	Books.	Letters.	Newspapers.	Parcels.	Books.
Received,...	431,894	49,181	4,329	3,960	470,342	51,782	4,116	5,736	540,435	61,418	2,899	0,524
Despatched,	412,141	61,446	3,115	1,957	462,456	52,710	3,674	5,732	652,473	38,865	3,665	10,819

Telegraph.

The Meerut subdivision of the Telegraph Department comprises the main line from Ambála to Agra, and the branch lines from Ghaziabad to Dehli, from Meerut to Mussooree, and from Rúrki to Hardwár. The head-quarters of the subdivision are at Meerut, and the whole is included in the Panjáb Division. There are telegraph offices at the railway stations at Ghaziabad, Meerut city and cantonments, and Begamabad within this district.

Police.

The chaukidárs or village watchmen, as reorganised under Act XVI. of 1873, numbered 2,600 men in 1873, entertained at an annual cost of Rs. 93,600, which is met from the provincial budget. The ordinary pay is at the rate of Rs. 3 per watchman per month. There is one watchman to every 401 inhabitants, and there are 1,518 inhabited villages in the district. The regular police are enrolled under Act V. of 1861, and during the same year numbered 1,469 men of all ranks, costing Rs. 1,61,679 per annum, of which Rs. 1,11,243 were chargeable to the provincial revenue. The proportion of police to area is one to 1·6 square miles, and to total population is one to every 867 inhabitants. The following statement shows the crime statistics and the results of police action for seven years after the mutiny :—

Year.	*Cases cognizable by the police.*					*Value of property.*		*Cases.*			*Persons.*			
	Murder.	Dacoity.	Robbery.	Burglary.	Theft.	Stolen.	Recovered.	Total cognizable.	Under enquiry.	Prosecuted to conviction.	Brought to trial.	Convicted and committed.	Acquitted.	Proportion of convictions to persons tried.
						Rs.	Rs.							
1865, ...	9	..	9	555	1,268	50,856	21,096	2,421	818	495	1,565	833	741	53·20
1867, ...	11	...	9	819	1,462	69,247	30,081	2,633	1,914	512	1,518	936	518	61·10
1868, ...	13	1	19	851	1,373	74,173	28,675	2,652	2,046	552	1,720	1,075	597	62·50
1870, ...	14	...	27	819	1,027	96,487	20,676	2,563	1,706	683	1,975	1,248	727	63·20
1871, ...	12	1	21	579	1,141	83,287	18,854	3,050	2,600	1,128	2,845	2,032	813	71·42
1872, ...	13	4	20	729	1,184	75,927	28,284	3,207	3,060	1,291	2,894	2,160	327	74·64
1873, ...	12	2	31	831	765	66,867	31,091	3,420	3,382	1,941	4,562	3,914	581	85·79

The cases of heinous crime in this district undetected are both many and heavy, and it would appear that there are few districts in these Provinces where the administration in this respect bears such little fruit. The Magistrate attributes this state of affairs to the present village communal system undergoing a process of disintegration, rendering the village joint responsibility null and void, and to undue reductions in the numbers of the force. The Inspector-General, on the other hand, attributes it to the non-enforcement of the responsibility of landowners in reporting crime under the existing regulations; whatever may be the cause, the results are not creditable to the administration.

There are first-class police-stations in Meerut city and cantonments, Baraut, Bágpat, Sardhana, Gháziabad, Hápur, Garhmuktesar, Parichhatgarh, Jáni, Begamabad, Kharkoda, Mawána, Daurála, Shahdara, and Kithor. Second-class stations exist at Loni, Dhaulána, Binauli, Meerut, Chhaprauli, Baleni, Khekara, Dáha, Dásna, Pilkhua, Murádnagar, Púth, Baksar, Kumruddínnagar, Bahsúma, Sarzapur, Kunkurkhera, and Mau. Third-class stations or outposts are established at Bahrámbás, Dádri, Phaphúnda, Bará Partábpur, Púth khás, Inchauli, Kásimpur, Kutána, Jagaula, Dohái, Newari, Kaili, Upahra, and Nizámpur, most of which are noticed in the Gazetteer portion of this article.

Infanticide.

The result of the inquiries instituted regarding the practice of female infanticide in this district was that only five villages inhabited by the Búrha and Tewat septs of Játs of the Hole stock were proclaimed. In 1871-72 they numbered 819 souls, amongst whom there were 259 boys and 59 girls, and the rules were put in force from the 1st April, 1871. These villages are all situated in the Hápur parganah, and during the year 1871-72 the rules worked well, so that it was not found necessary to institute any prosecutions for evasion. In 1873 Mr. Plowden presented an exhaustive report on the Játs, Ahirs, and Gújars based on special inquiries directed to be taken during the preparation of the census of 1872, from which it would appear that he considered these three tribes as needing further examination, besides pointing out certain villages where it seemed advisable to at once introduce the rules for repression. His successor was directed to review these statements and make definite proposals for the introduction of the Act, but these instructions were carried out in such a way that no orders could issue during 1874.

Central jail.

The statistics of the central jail are as follows:—The average number of prisoners in jail in 1850 was 378; in 1860 was 1,799, and in 1870 was 1,329; the *ratio* per cent. of this average number to the population, as shown in the census of 1865 (1,199,593), was in 1850, ·031; in 1860, ·150; in 1870, ·154. The number of prisoners admitted in 1860 was 3,902, and in 1870 was 2,525, of whom 98 were females. The number of prisoners discharged in 1870 was 1,289. In 1870 there were

873 admissions into hospital, giving a *ratio* of admissions to average strength of 65·66; of these 136 died, or 10·23 of the total strength. The cost per prisoner per annum in 1870 was for rations, Rs. 19-12-0; clothing, Rs. 2-14-9; fixed establishment, Rs. 17-5-3; contingent guards, Re. 1-10-2; police guards, Rs. 3-9-0; and additions and repairs, Rs. 2-10-11, or a total of Rs. 47-14-1. The total manufactures during the same year amounted to Rs. 1,320-1-0, and the average earning of each prisoner to Rs. 9-15-8. In 1870 the Muhammadan prisoners numbered 507, and the Hindú 803. There were 34 prisoners under 16 years of age, 1,493 between 16 and 40, 252 between 40 and 60, and 36 above 60. The occupations of the majority of the male prisoners were, agriculturists 766, labourers 234, shop-keepers 151, and domestic servants 158.

District jail.

The statistics of the district jail for 1870 are as follows:—The average number of prisoners in jail was 524. The number of prisoners admitted was 1,080. The number of prisoners discharged was 517. There were 608 admissions into hospital, giving a ratio of admissions to average strength of .116·07; of these 58 died, or 11·07 of the total strength. The cost per prisoner per annum for rations was Rs. 19-12-0; clothing, Rs. 4-12-6; fixed establishment, Rs. 6-12-6; contingent guards, Re. 1-8-11; police guards, Rs. 2-10-1; or a total of Rs. 35-8-0. The total manufactures during the same are amounted to Rs. 767-11-0, and the average earning of each prisoner to Re. 1-7-5. The Muhammadan prisoners numbered 219, and the Hindú 614. There were 7 prisoners under 16 years of age, 807 between 16 and 40, 16 between 40 and 60, and 3 above 60. The occupations of the majority of the male prisoners were agriculturists 433, labourers 213, and domestic servants 83.

Fiscal history.

As already noticed, the present district of Meerut formed a portion of the southern division of Saháranpur. In 1818 the present district was formed, and in 1842 many changes took place as well in the internal distribution of the several parganahs as in exchanges with the neighbouring districts; it is therefore impossible to enter into details here regarding the early fiscal history of the district. It has been more correctly noticed under the Saháranpur and Muzaffarnagar districts. I shall accordingly confine myself to the settlement under Regulation IX. of 1833 and the present settlement. In doing so the district must be divided into two portions. The first consists of parganahs Clihaprauli, Bágpat, Loni, and all the parganahs east of the Hindan except Sardhana, which were settled by Mr. Glyn and Mr. (subsequently Sir H. M.) Elliot from 1835 to 1837; and the second of the parganahs of Sardhana, Baraut, Kutána, and Barnáwa, which with Burhána, now in the Muzaffarnagar district, formed the estate of Begam Sumru. The existing settlement of the district was effected by Mr. W. A. Forbes, C.B., and Mr. J. S. Porter between the years 1865 and 1870. The total area of each parganah divided into assessable

and barren and free of revenue has already been given (page 239) for both settlements, so that here we have merely to note the fiscal results at each settlement and the revenue statistics of the census of 1872:—

Parganah.		Assessable area in acres.	Land-revenue.	Revenue-rate on cultivated area.	Revenue with cesses in 1872.	Parganah.		Assessable area in acres.	Land-revenue.	Revenue-rate per acre on cultivation.	Revenue with cesses in 1872.
			Rs.	Rs. a. p.	Rs.				Rs.	Rs. a. p.	Rs.
Meerut ...	1835,	195,464	3,84,557	2 3 8	...	Bágpat ...	1835,	95,386	1,48,220	1 13 8	...
	1866,	192,348	4,08,905	2 7 3	...		1866,	111,239	2,10,035	2 2 2	...
	1872,	194,090	4,13,536	2 7 3	4,54,961		1872,	110,975	2,10,015	2 1 1	2,31,199
Hápur ...	1835,	86,794	1,20,579	1 13 6	...	Baraut ...	1835,	40,575	1,07,478	3 3 6	...
	1866,	90,371	1,33,900	1 11 6	...		1866,	43,921	1,15,400	2 14 5	...
	1872,	85,163	1,34,320	1 11 7	1,48,775		1872,	43,595	1,15,400	2 14 2	1,26,948
Saráwa ...	1835,	40,858	52,552	1 12 2	...	Kutána, ...	1835,	38,094	87,873	3 4 7	...
	1866,	43,870	60,850	1 10 11	...		1866,	41,836	99,825	2 12 5	...
	1872,	42,444	60,905	1 11 0	67,201		1872,	40,152	99,425	2 12 10	1,09,376
Garhmuktesar.	1835,	49,322	48,096	1 10 0	...	Chhaprauli,	1835,	31,638	82,801	3 5 2	...
	1866,	56,796	58,880	1 5 3	...		1866,	33,691	89,725	3 1 7	...
	1872,	53,311	59,937	1 5 4	65,238		1872,	31,884	89,800	3 1 0	98,739
Púth, ...	1835,	30,477	40,196	1 14 10	...	Sardhana	1835,	70,889	1,57,714	3 1 1	..
	1866,	32,932	41,225	1 11 4	...		1866,	75,048	1,71,180	2 9 3	...
	1872,	32,365	40,052	1 10 7	44,135		1872,	75,018	1,71,403	2 8 7	1,88,560
Dásna ..	1835,	74,480	97,163	2 0 5	...	Barnáwa	1835,	53,377	1,20,795	3 2 8	...
	1866,	77,173	23,050	1 15 9	...		1866,	57,875	1,28,950	2 9 0	...
	1872,	77,123	1,12,335	1 14 0	1,33,334		1872,	57,903	1,29,035	2 9 0	1,41,951
Jaláláabad	1835,	103,742	43,580	1 11 6	...	Kithor ...	1835,	88,931	92,237	1 7 11	...
	1866,	110,956	1,75,055	1 14 4	...		1866,	105,598	1,19,380	1 7 6	...
	1872,	110,355	1,76,718	1 14 4	1,92,631		1872,	105,551	1,18,545	1 6 6	1,30,428
Loni ...	1835,	74,676	1,76,878	1 7 6	...	Hastinápur	1835,	94,192	1,14,162	1 14 2	...
	1866,	84,792	95,201	1 8 7	...		1866,	131,502	1,48,780	1 13 5	...
	1872,	85,765	95,373	1 6 9	1,04,931		1872,	132,004	1,47,680	1 13 4	16,247

Sir H. M. Elliot.

"The collections of the Meerut district," writes Sir H. M. Elliot in 1835, "have always been realized with facility, and there is every reason to suppose that the land-revenue has not pressed heavily on the resources of the country. Considerable variety prevails in the fertility of the several parganahs; those which are between the Káli Nadi and the Ganges being poor and sandy, while those near the Jumna are chiefly of a rich black soil, producing sugarcane, tobacco, cotton, and other superior products, and assessed at an average considerably higher. The natural advantages of the western side have been considerably improved by the opening of the Duáb canal, which, though it injures the soil after the second or third year by a sandy deposit, has had the effect of causing all the waste in its neighbourhood to be reclaimed and yield abundant harvests." Mr. Elliot considered Chhaprauli the first parganah in the district. He writes: "Sugarcane, cotton, wheat and tobacco are cultivated in great abundance, and all the villages are admirably situated for the disposal of their produce. They have large towns and marts on every side—Kairána, Kándhla, Shámli, Kutána and Baraut, with the Jumna on the west and the canal on the east. To all these is added the advantage of being well populated and well cultivated by Játs." The soil of parganah Loni is very inferior to that of Bágpat, having a great admixture of sand, and salt and consequently benefiting less by the means of

irrigation at its disposal. The cultivators also, being chiefly Gújars and Tagas, are not such active agriculturists as in other parganahs. Of Dásna he writes: "Sugarcane is cultivated only in a few villages, but good *rabi* crops are produced. The irrigated land bears a proportion of more than one-half to the unirrigated. The waste land is almost equal to one-half of the land under cultivation. At the present time the cultivated area is 61,932 acres, the uncultivated but 25,916. In the parganah of Púth, particularly in the villages which are near to the ranges, there is a great admixture of sand with the soil." Mr. Plowden writes (1840) of the deceased Begam Sumru's estates:—"The nature and quality of the soil is similar to that which characterises the western portion of the district, being in the two parganahs nearest the Jumna (Kutána and Baraut) a rich black loam and assuming a redder tinge, and a less degree of consistency in the other three and more inland (Sardhana, Barnáwa, Burhána)." *Dákra* and *seota* are the denominations of these two kinds of soil; the proportion of *bhúr* or inferior land to the above in the parganahs is very small, being about one-eighth of the whole.

As division of crops generally prevailed at last settlement, Sir H. M. Elliot found it difficult to discover a money-rate which should form a fair guide in assessment. He collected the crop rates of all the villages in Nain Singh's *mukarari* from the papers of the estate, and from the kánúngos the prevailing rate in every village, and with these data and local inquiry to correct them he drew up an average rate[1] per pukka bígha for irrigated and dry land, without specification of soil, for which he relied upon the landholders' own statements. The parganah rate thus formed was again tested by local inquiry and a comparison of the records of rent suits and an examination of the grain-dealers' books. The parganah rate was then distributed over the dry and irrigated cultivation of each village, and was lowered or raised according to the individual capacities of the villages. "Regard was had to circumstance which should have due weight in fixing assessment, such as the state of the village, whether deserted or in good repair; the prevalence of *pahi* cultivation; the amount of culturable waste; facility of land or water carriage; the past fiscal history; the nature of the soil; the caste of the cultivators; the unanimity or discord of the community; the depth of water; the density of the population; the previous alienation of rights, and the vicinity of marts."

Parganah selections.

In parganah Meerut irrigation[2] has greatly increased since Sir H. Elliot's assessment and cultivation has advanced over ten per cent., so that it easily bears the new revenue. It is one of the largest parganahs, and contains within it the city of Meerut and adjoining

[1] The pukka bígha is 0·625, or five-eighths of an acre: I, Set. Rep., 181. [2] Further details will be found under each parganah in the second part of this article, and for the 1835 assessment in I., Set. Rep., 163.

villages. In parganah Hápur, though cultivation has increased nearly 20 per cent. and irrigation 107 per cent. between the two settlements, yet in seasons of drought the parganah suffers very much, and during the currency of the last settlement 20 per cent. of the area changed hands and was chiefly bought up by money-lenders. Saráwa is a poor parganah on the whole, and though the new revenue is a low one, it would seem not to be able to bear more. In Púth the inequalities of the last settlement have been removed, and with increased irrigation (now only 20 per cent. on the cultivated area) this parganah will probably equal the others by the close of the settlement. In Ghéziabad the old assessments seem not to have been adjusted on any firm basis; the fourth settlement reduced the revenue considerably, only to be again increased at the fifth. Here, too, many confiscations took place on account of mutiny, so that it is difficult to attain to any fixed data for comparison with the last two settlements. In Jalálabad the present revenue-rate is a low one, but there is still much waste land, and the landholders need encouragement to reclaim. Loni shows a marked improvement: irrigation has trebled and cultivation has increased over 18 per cent., but the poor quality of the *khádir* land and the bad cultivation of the Gújars have tended to keep down the revenue-rate. The same causes for the comparative lowness of the rate exist in Bágpat, which in other respects has much improved of late years. Chhapraulí is situated in the heart of the best Ját tract, and naturally gives a higher revenue-rate than the Gújar tracts. Both soils and irrigation are excellent, and there is no considerable amount of bad land, while manure is abundant and much used by the cultivators. Garhmuktesar shows an increase of nearly 50 per cent. in cultivation, while irrigation has nearly trebled. The poorness of the new land explains the largeness of the increase in the revenue with a fall in the rates. In Kithor, too, the cultivation has increased by over 30 per cent., while the irrigation has more than doubled. In Hastinápur there has been similar increase in both cultivation and irrigation, still the revenue-rate is higher than any other Ganges parganah.

The Sumru estates.

The remaining parganahs formed portions of the estate of the notorious Begam Sumru, and Mr. Plowden in his report gives a graphic description of their state during the Begam's management. Up to the death of the Begam a very large revenue was extracted from the estate, and at the same time arrears and transfers were almost unknown. The cultivators were assisted with or even compelled to accept *takkávi* advances whenever they needed them, and were, also, compelled to pay the highest revenue which their character as cultivators or the goodness or otherwise of the season permitted the tax-gatherers to collect. Unfortunately for the people, three years before the lapse of the estate, the Begam's heir abandoned the policy that had hitherto been so successful, and fixed a revenue for three

years on an average somewhat in excess of the previous demand. The average demand during the 20 years of the Begam's management had been Rs. 5,49,157, with a balance of Rs. 19,439. This was increased to Rs. 6,79,730 in the first year of the new settlement, and rose to Rs. 6,91,388, exclusive of Rs. 23,047, the revenue of villages held under direct management, in the third year. The consequence may be easily imagined. The cultivators abandoned their holdings, 128 villages fell under direct management, and the ruin was rapidly increasing, when the death of the Begam and the lapse of her possessions to the British Government restored confidence to the people. The sudden increase in the revenue was not the only cause for the deteriorated state of these parganahs: to this must be added "gross mismanagement in the fiscal and judicial administration by the systematic plunder and extortion indulged in by every underling in office, by the heavy miscellaneous taxes which annoyed and harassed the people and paralysed all commercial dealings, and by the hopelessness of redress." Mr. Plowden assessed the parganahs, including Sardhana, Baraut, Barnáwa and Kutána, at Rs. 5,44,000. The new assessment, though high when compared with the eastern parganahs, was very moderate when compared with the revenue collected during the Begam's administration, and it must also be remembered that these parganahs are the very best in the Meerut district.

Mode of assessment.

Mr. Forbes, in a memorandum attached to the settlement report, explains the mode of assessment at the recent settlement. His first care was to form soil and produce rates. This he accomplished by taking a number of villages in each parganah and estimating the produce of each kind of crop in each class of soil in well, tank and irrigated canal land. From the outturn where rents were paid in kind was deducted the cultivator's share at the average proportion found to prevail in the parganah. The average price of the remainder was obtained from the grain-dealers' books for ten years tested by the prices-current of the district, and thus a rent-rate for each crop on each class of soil was obtained. Where rents were paid in cash a second series of rent-rates was found by consulting the village rent-roll and rent-suits and by local inquiry. The average of the two series of rates were then applied to each class of soil in each village, and an average revenue-rate for each tract was thus obtained. These served as a test of the correctness of the conclusions drawn from the personal village-to-village inquisition subsequently undertaken, when allowances were made for natural disabilities and advantages, such as nearness or remoteness from markets, irrigation, roads, the character of the cultivators, and all other similar matters affecting the revenue-paying power of the village. On the whole, the present settlement has succeeded in equalising the assessments with an increase in the Government demand and a complete record of rights, and both the people and the Government are to be congratulated on its successful termination.

The landowning castes have been already noted, it is sufficient here to summarise the results. The following list shows the number of villages held by each caste at the recent settlement :--

Caste of landowners.

Játs, ...	...	...	488	Bohras, ...	...	...	4
Hindú Tagas,	...	...	289	Khattris,...	...	...	5
Musalmán ditto,	...	...	46	Hindú Meos,	...	...	1
Gújars, ...	...	...	209	Musalmán Meos,	...	...	2
Hindú Rajpúts,	...	...	194	Kahárs,	...	...	2
Musalmán ditto,	...	...	48	Mális, ...	...	...	5
Baniyas, ...	...	...	136	Gosháins, ...	...	...	9
Brahmans, ...	...	...	76	Gaddis, ...	...	...	6
Ahírs, ...	...	...	44	Kambos,	...	...	13
Rawas, ...	...	...	17	Musalmáns,	...	...	224
Chauháns, ...	...	...	15	Europeans,	...	...	33
Káyaths, ...	...	...	16	Total	...	...	1,881

Tenures of land.

As in nearly all the other districts of the Duáb, the tenures of land may here be classed under zamín dári, perfect pattidári, or, thirdly, imperfect pattidári, including bháyachára. Sir H. M. Elliot in his report on the settlement of this district in August, 1836, says:—"I have contented myself with considering that whenever the land of a village has been actually divided, or the extent of a sharer's interests is limited by the quantity of land in his possession, or where it is held in severalty by men who have no other bond of connection with each other than the necessity of fulfilling a common obligation, the tenure is *pattidári;* that the same minutely subdivided is *bháyachára;* and where there is no division of land, but only a right to a certain portion of profit expressed in fractions of a bígha, that the tenure is *zamíndári.* Some tribes have a greater inclination for a division of their land than others, and this effect is easily to be ascribed to their peculiar propensities. The Játs, for instance, on account of their fondness for agricultural pursuits, generally prefer the *bháyachára;* the Tagas either *bháyachára* or divided *zamíndári;* the Rajpúts, Patháns, and Sayyids, being too insolvent and proud to cultivate much themselves, generally prefer the *biswa* division; and the Gújars, being much addicted to thieving and more indifferent than any other class, scarcely ever have a *pattidári* division, and very seldom subdivide a *zamíndári:* they are usually allowed to resume their own share after a long absence or sojourn in a foreign land, which right would be contested by the other classes, amongst whom the relinquishment of a share for any length of time is reckoned a virtual defeasance." In this district, notwithstanding its vicinity to the scene of perpetual revolutions and anarchy, almost all the landed proprietors trace their descent from periods long antecedent to these very revolutions. The *chaurásis* (or 84 villages, equivalent to the Saxon hundreds) may be said to exist in almost their pristine integrity among the Rajpút and Ját communities, and the subdivisions into 42 *(beálsi)* and 12 *(bárah)* villages are still more frequent. These *chaurásis* are found all over Rajputána. Sir H. M. Elliot mentions several *chaurásis* now existing in this district. There is a *chaurási* of Chauhán Rajpúts in Dúsna

and Jalálabad. There is half a *chaurási* of the same tribe in Púth. The parganah of Loni was formerly a *chaurási*. In Bágpat the Gaur Tagas had a *chaurási* of which but few villages now remain in their possession. In the same parganah the Deswál Ahírs had half a *chaurási*. The Maheshwára Tagas have a *chaurási* in Kithor. The Basián and Dateon Tagas have each a *chaurási* in Púth and Sayána (in Bulandshahr). The parganah of Meerut is said to have consisted of 360 villages. The fact that the Tagas have so many *chaurásis*, a Rajpút institution, seems to support their own story that they came from Hariána, not from Gaur. Elliot does not credit this tradition. The most ancient tenures in the district are those of the Rajpúts, Tagas, Gújars, and Játs, with the exception of the Panjábi Játs, *i. e.*, those of the Dhe clan who have been located here only within the last century, and the Gújars near the Ganges who obtained possession during the time of Raja Jít Singh and his successors. The Sayyids say that they acquired their zamíndáris during the earliest periods of Musalmán conquest, and the Patháns about Púth and Bahádurgarh in the time of Jahángír. The only taluka in the district is that of Paríchhatgarh, comprising six villages in parganah Kithor.

Mode of collection.

The most common method in *zamíndári* villages is to collect in common and divide the profits either before or after the payment of the revenue. In the first case the sharer is responsible for a particular portion of the revenue, and the fractional rights would be sold in case of default: in the other, after the whole revenue is paid, the profits or losses are distributed according to the several shares, and the whole village is responsible for revenue balances. In *zamíndári* villages inferior sharers frequently cultivate at fixed rates, which are generally comparatively low, and claim nothing beyond this limitation, but, in addition, they usually enjoy immunity from the payment of village expenses. In *bháyachára* villages, where each sharer's holding is divided off, a regular money rent is paid generally by distributing at an even rate per bígha on each share the Government revenue as well as all other expenses which may arise on account of the payment of the land-revenue and the village charges. In *pattidári* villages various modes of payment prevail, varying even in the pattis of the same village, but generally a *báchh* or rate system of some kind or other predominates.[1]

Village expenses.

The method of collecting the sum varies considerably, though one system is usually found to prevail with very slight distinctions in one parganah or other division of country. In some communities the malguzárs are alone subject to the impost, in others the whole body of sharers or only tenants-at-will; sometimes the amount is distributed by *báchh* or rate, sometimes from the produce of singháras (*Trapa bispinosa*), sometimes at a fixed rate per man or per bígha, but generally it is realized according

[1] Elliot Set. Rep., I., 185.

to the method which prevails in collecting the Government revenue. In some villages a considerable amount is realized on account of *malba* (as these charges are called), and it will be found generally to vary with the character and caste of the proprietor. In these village expenses are entered such items as mourning *pagrís (dastár matami)*, alms to fakírs, travellers, and jugglers, which generally come into the account of the village Baniya, through whom these expenses are paid under the head of *bardásht* or *túchapat*, lambardár's expenses in attending Government offices, fines, money expended in repairs of village buildings, &c.

Existing tenures.

From the returns of the late settlement it appears that of the 2,255 máhals or estates in the district, 970 are *zamíndári*, 841 are *bháyachára*, and 244 are *pattidári*. In the Bágpat and Sardhana tahsíls nearly all villages are *bháyachára*. In Gháziabad tahsíl, of 429 estates, 206 are *bháyachára*, 37 are *pattidári*, and 117 *zamíndári*.

I here append a statement showing the number of estates upon the rent-roll of the district, with the total land-revenue paid and the number of registered proprietors paying rent direct to Government for the following years:—

Year.	Number of estates.	Number of registered proprietors or co-parceners.	Total land-revenue paid.	Average land-revenue paid by each estate.	Average land-revenue paid by each proprietor or coparcener.
				Rs. a. p.	Rs. a. p.
1850-51, ...	1,614	63,186	16 23,796	1,006 1 1	25 11 2
1860-61, ...	1,969	79,925	17,83,304	905 11 0	22 4 8
1869-70, ...	2,046	94,208	18,04,976	882 3 1	19 2 6

Transfers.

During the currency of the thirty years' settlement 43 per cent. of the area changed hands, of which only five per cent. was by forced sale. This may perhaps be due to the character of the settlement, which was "fixed more with regard to the means of the persons from whom the engagements were taken than to the capabilities of individual villages and the circumstances of the cultivators." In Chhaprauli, where village capabilities were not ignored, the transfers amounted to only sixteen per cent. of the total area, and of these only one-fourth were due to forced sale. In Kutána eight per cent. changed hands, chiefly the estates of Játs and Tagas, which were bought in by the same tribes. In Garhmuktesar the transfers were 29 per cent., but deducting private sales, due in a great part to the enhanced value of the land from increase in cultivation and irrigation, the residue denoting forced sales is little more than three per cent. Gháziabad shows the largest number of transfers, but as most of these are due to confiscation after the mutiny on

account of rebellion they lead to no just conclusion. The cause of their rebellion was not due to heavy assessments. In a few cases the Rajpúts fought out old feuds and rose against their neighbours rather than against Government. In one case it is to be feared that the proprietors lost their estate on account of the rebellion of the non-proprietary residents. Háput shows transfers amounting to 20 per cent., and here the old proprietors have been replaced by money-lenders. The Játs too have bought up much of the land and parted with little, while the Tagas have lost more than they gained by 2,000 acres. Of the 28 per cent. transferred in Loni the greater portion belonged to the prevailing castes of Gújars and Tagas, while Brahmans, Rajpúts, Káyaths, Afgháns, and Sayyids form the new proprietary body. In Jalálabad the Játs and Tagas have exchanged amongst themselves 23 per cent. of the area. In Sardhana 14 per cent. of the area possessed by Játs, Tagas and Rajpúts has been transferred, and one-quarter of it has fallen into the hands of Baniyas. This is exclusive of the confiscated villages of Sardhana and Panchli. In Barnáwa only nine per cent. has changed hands, and this was principally due to the pressure of the famine years. In Bágpat the changes have been very few, but in Meerut again they rise to 20 per cent. of the area. Few, however, of the Meerut transfers, with perhaps the exception of the villages of Jatauli and Mámipur, can be attributed to severity of assessment. Of the entire transfers those in 69 estates are due to confiscation, the majority of which belonged to village communities, *(bláyachára);* of these 49 have been sold by auction and 16 have been given away in reward, while four are held under direct management.

Changes before 1835.

Regarding the changes occurring before the thirty years settlement, Sir H. M. Elliot, writing in 1836, says "the Meerut district has been very little affected by auction sales, and comparatively few interests have been transferred since the conquest." From 1213 to 1233 *fasli* (1805-06 to 1825-26 A.D.) only 38 villages had been sold both for arrears of revenue and under decrees of Court. This satisfactory state of things continued up to the time of the mutiny in 1857, and still exists. Mr. Forbes in his revenue administration report of 1273 *fasli*, corresponding to 1865-66 A.D., remarks:—"A man who is sold up under a decree of court, or who is forced to mortgage his lands, is in ninety-nine cases out of a hundred in distressed circumstances, whilst on the other hand the free sale of land by private arrangement is good proof that land is in demand and can find ready purchasers. In that year there were only 67 forced sales. This for a district producing 18¼ lakhs of land-revenue is a small number." Again in his report for 1276 *fasli* (1868-69 A.D.) he writes:—"I am not disposed to regret the increase of private sales; they are invariably of small holdings, and I think much benefit will be found to result from such transfers. Land I know to be rapidly increasing in value, and the transfers both by sale and

mortgage are taking place between the agriculturists themselves, and not with the trading classes."

The official returns for 1860-61 to 1873-74 are shown below :—

Year.	Under orders of Court.				By Private Transfer.				
	Sale.				*Sale.*				
	Number of cases.	Aggregate land-revenue of property transferred.	Number of other cases.	Total number of cases.	Number of cases.	Aggregate land-revenue of property transferred.	Successive number of cases.	Mortgage number of cases.	Total number of cases.
1860-61, ...	55	...	175	230	483	...	1,748	415	2,646
1861-62, ...	38	71	120	158	271	2,034	2,366	202	2,839
1862-63, ...	46	543	158	204	189	4,699	2,633	137	2,959
1863-64, ...	90	184	160	250	320	3,956	2,579	264	3,163
1864-65, ...	73	1,310	199	272	276	1,336	2,148	284	2,708
1865-66, ...	67	1,580	167	234	336	4,097	1,648	133	2,116
1866-67, ...	39	49	233	272	279	2,732	1,113	166	1,558
1867-68, ...	59	1,256	206	265	354	2,444	411	154	919
1868-69, ...	44	187	299	343	462	2,827	491	298	1,251
1869-70, ...	60	431	138	198	490	8,561	510	300	1,300
1870-71, ...	73	353	95	168	484	2,436	516	429	1,429
1871-72, ...	99	4,090	61	160	393	25,529	810	653	1,856
1872-73, ...	139	4,854	103	242	609	18,607	1,040	877	2,526
1873-74, ...	172	2,445	95	267	503	61,068	1,512	831	2,846

Partitions.

The following is a statement of the partitions of rights in land completed in this district during the six years 1865-66 to 1871-72 :—

Fasli year.	Completed and confirmed by the Collector.	*Number of pattis.*	
		Before division.	After division.
1273, ...	73	78	262
1274, ...	64	71	197
1275, ...	340	358	821
1276, ...	547	656	1,199
1277, ...	374	528	1,098
1278, ...	534	1,862	3,043

The partition Act, XIX. of 1873, is productive of the greatest advantage to the people, and has given an extraordinary impetus to high and careful farming. In place of vague divisions, in which the sharers knew not what they owned, the Act gives them their land in smaller holdings clearly defined.

Old influential families.

The Meerut district is singularly destitute of old influential families. Those worthy of mention are the Gújars of Parichhatgarh, the Begam Sumru, the Kambos of Meerut, and the Kánúngo family of the same places. The Játs of Kuchchesar have been noticed under the Bulandshahr district.

The Gújars of Parichhatgarh.

The Gújar family of Parichhatgarh, like their clansmen of Dádri and Landhaura and the Játs of Kuchchesar, owed their existence to the troubled state of the times during the latter half of the past century. The founder of the family, Rao Jít Singh, found the occupation of leader of banditti more profitable than his hereditary calling of grazier and cattle-lifter, and more to his taste than cultivating the soil for crops which the Sikh, Marhattas or Imperialist raider had quite as good a chance of reaping as the person who sowed them. He commanded the ghâts into Rohilkhand and reduced the levying of black mail to a science, establishing his ámils as he went. Although his depredations were known to the court of Dehli, no notice was taken of his conduct until he happened to slay, in an encounter, the *chela* (or disciple) of one Parta Singh, a Dákhini subahdár and favourite of the mother of Ahmad Shâh, the reigning emperor. Parta Singh marched with what he considered a sufficient force to chastise this insolent ploughman and cowherd, but was himself defeated and slain. Kumar Ali, the kotwál of Dehli, next tried to capture the Gújar leader, but suffered the same fate, and so others, until the emperor invited the heads of the banditti to Dehli and invested them with plenary authority over the country that they had already been able to occupy, on condition that they should prevent others from thieving. Dargáhi Singh held Dádri and its neighbourhood; the Ját leader of Kuchchesar, Mangni Rám, held Sayána, Púth and Farída, and Jít Singh obtained passession of the eastern parganahs of this district. Jít Singh died of paralysis without leaving any male issue, and was succeeded by his nephew, Nain Singh, to whom Perron, the Marhatta governor of Aligarh, gave over 300 villages in *jáyír*. Nain Singh first established himself at Parichhatgarh, and subsequently at Bahsúma or Baisambha. On the occupation of Meerut by the British, Nain Singh was permitted to hold his accumulation on the terms granted to him by the Marhattas, and subsequently this concession was made to him for his life.[1] During his lifetime he gave much trouble to the authorities by harbouring offenders and engaging in an extensive smuggling trade in salt. Nain Singh died about the middle of the year 1818, and his family were allowed to retain the *rabi* produce of that year. He left one son, Nátha Singh, who made no claim to his father's *mukarari*, but sued for the proprietary right in 183 villages under a zamíndári farmán by right of inheritance, and for similar rights in 35½ villages by virtue of a lease at a fixed revenue in his own name. The validity of these sanads was acknowledged by

[1] Board's Records, October 1, 1804; September 30, 1805.

Government,[1] as well as of certain decrees founded upon them. Unfortunately, at the time the decrees were given, the distinction between the different interests which attach to land, its produce and rent, was imperfectly understood, and under the general term zamíndári proprietors of very different kinds were comprehended. The Government ruled that the sanads produced by Nátha Singh could not be held "to vest the grantees with more than a hereditary right of collection and management, with the perquisites ordinarily attaching to such málguzárs, to which was subsequently added the advantages of a fixed contract. There seems not to be the slightest ground for supposing that it was in any degree intended to interfere with the rights which might be enjoyed by cultivators and málguzárs whom the grantee is enjoined to favour and protect. The sanads were granted in the disturbed reign of Ahmad Sháh, and the tenure of the Raja would seem to have originated a short time before the deposition and death of that monarch, and it would have been peculiarly improper to allow any latitude of interpretation, and the character of Nátha Singh appeared, unfortunately, to be such as to afford a strong ground of objection to his being admitted to engagements for the Government revenue. The objection prevailed, of course, with peculiar force in regard to maháls subject to a full assessment." It was, therefore, resolved that with the exception of the 35½ villages which Nátha Singh had been allowed to hold under a lease at a fixed revenue, he should be excluded from the management of the villages held by his father in *mukarari*, but should have an allowance of five per cent. on their revenue as a *nankár* allowance.

Nátha Singh died on the 15th August, 1833, and the villages held by him escheated to Government. Through some misapprehension of the terms of the grant, a payment amounting to Rs. 9,000 a year continued to be made by Government to Nátha Singh's widows on account of these villages and the five per cent. allowance, when Sir H. M. Elliot took up the settlement of the district in 1836. He, with much show of reason, pointed out the absence of any authority or cause for this payment, and showed that the documents relied upon by Nátha Singh in support of his claims,[2] though accepted by the civil courts, were "impudent forgeries." The *mukarari*, at the conquest, comprised 274 villages, held at a fixed revenue of Rs. 50,000, which on their lapse were assessed at Rs. 1,87,068 for 1226 to 1230 *fasli* (1818-1823). In 1836 there were 136 of these villages with acknowledged proprietors, of which 20 were held by relatives of Nain Singh. In the remainder the claim to the proprietary right was disputed. Nátha Singh left one daughter, Lád Kunwar, who married Khushál Singh of the Landhaura family, and thus the Meerut and Saháranpur families became amalgamated. The fate of the Saháranpur estates is told under the notice of that district. The estates were managed by Ráni Dhan Kunwar, the mother of Khushál Singh, who predeceased her in 1829, and after her death Ráni

[1] August 28, 1833. [2] I. Set. Rep., 208.

Lád Kunwar continued in possession. She died in July, 1849, leaving Harbans Singh as her successor, who died in January, 1850, and was succeeded by his son Raghubír Singh. He was a minor on his accession to the estate, which came under the Court of Wards. The property was released in December, 1867, and in April, 1868, Raghubír Singh died, leaving a son, Jagat Prakásh, who has also deceased. The estate is now enjoyed by Kamala Kunwar, mother of Raghubír Singh, and by Dharm Kunwar, widow of Raghubír Singh.[1] In this district they possess twenty-five villages and portions of eight others, at a revenue of Rs. 29,348 a year, and yielding a net annual profit of Rs. 24,708. The total value of the Landhaura estates is estimated at about fourteen lakhs of rupees.

The Kambos.

There are still Hindú Kambos in the district, and popular tradition gives the same origin to the Musalmán Kambos. The Kambos themselves say that they were, in early times, a distinguished family in Ghazni, deriving their name from '*kám*' and '*go*', the root of the Persian word "*guftan*" 'to say;' and they assert from this fanciful derivation that they were, in those days, "little talkers, but great in action." When Mahmúd Ghaznavi set out on his expedition to Hindustán, they accompanied him and succeeded in capturing the fort of Raja Mai of Meerut, where they settled. They assert that one Hasan Mahmúdi, a Kambo, was vazír of Mahmúd, and that he built the Jámah Masjid in the city. The Masjid is still in existence, and they say that around it are buried the Kambo warriors who fell in the attack on Meerut. Soon afterwards all the Kambos except Khwaja-ud-dín and Khwaja Meta left Meerut, and from these two who remained the Kambos of the present day derive their origin. The more probable account is that the Kambos were amongst the earliest Hindú converts to Islám, and were rewarded for their change of religion by the grant of lands in Meerut. The ancestors of the present family built the Sangi Mahál now known as the permit house, and the Rangi Mahál, both of which are still in existence. The most noted member of the family in recent times was Nawáb Khairandesh Khán, who flourished during the reign of the Emperor Sháhjahán and built the Khairnagar gate and fort in the city. He also built in 1691 A.D. a fine mosque called '*Khair-ul-masájid wald muábid*,' and founded Khairandeshpur in the Etáwa district, and muhallas in Etáwa and Delhi. He is said to have been governor of Katehir (Rohilkhand), Behar, Etáwa, Bengal, Kálábágh, and Hámúri at different times in his life. The following list shows his successors:—Khairandesh Khán; Khairiyatandesh Khán, governor of Káshmir; Afiyatandesh Khán, deputy governor of Etáwa; Farhatandesh Khán; and Mubárak Ali Khán, who is the present representative of the family and an Honorary Magistrate for the city of Meerut.

[1] This is the Raghubír Singh to personate whom a claimant arose in Saháranpur in 1874.

Kánúngo.

The Kánúngo family, usually called Kánúngoiyán, is of the Agarwála subdivision of Baniyas. The founder of the family was one Jográj, who lived in the reign of Aurangzeb. The members of this family still continue to hold responsible positions under the Government. They possess many villages. Besides these four families there is a highly respectable Bishnoi family in Phalauda. From the papers of this family it appears that a Rahtor Rajpút, named Mohat, a resident of the village of Pepasár in Nagor in Rajpútána, was childless, and his wife was old. This Rajpút was a pious man and a worshipper of Vishnu. He longed for offspring, and at length, by the grace of the deity, his aged wife became pregnant. A son was born on the eighth day of the dark half of the month of Bhádon in the year 1508 *sanvat* (1451 A.D.) The child was named Vishnavi Parameshwára, and when he grew up he declared himself an incarnation of the deity under the name of Jhámaji, and disciples from all castes—Brahmans Rajpúts, Chauháns, Baniyas and Ját—collected around him. A great famine increased his followers, for Baniyas, the wealthiest of his disciples, were directed by him to distribute food to the starving, on the condition that they joined his sect. The Vishnois recognize all Hindú gods, but Vishnu is their supreme deity. The Vedas and Shástras are recognized by all, the Kurán by none. The Vishnois worship either in temples consecrated to Vishnu, or where there are no such temples, they perform the *aganhotri* (or hom sacrifice) in their houses. The *aganhotri* is simply an offering of *ghi*. This offering is celebrated with considerable ceremony on the *amáwas* (fifteenth) of every month. On this day the Vishnois fast. Their great holidays are the *amáwas* of Bhádon, Asauj, Phálgun, and Chait. Bishnoism or Vishnoism does not cause a confusion of caste: a Vishnoi Rajpút will marry into the family of a Vishnoi Rajpút, and a Vishnoi Baniya into the family of a Vishnoi Baniya. All Vishnois however eat and drink together. On the birth of a child, on the sixth day, Hindú rites are observed with the addition of the *aganhotri*. On the death of a Vishnoi the body is usually buried. Where the Ganges is near at hand the body should be committed to it. Vishnois cannot eat and drink with any one of a different religion, and they must always have their grain parched by persons of the same sect. A Vishnoi marriage is celebrated exactly in accordance with Hindú rites, a Brahman superintending the circumambulation of bride and bridegroom. If a Brahman is not at hand, the marriage may be solemnised by a Hindú *fakír* or *jogi*. The Vishnois preserve their *gots* and *áls* or subdivisions of castes in the same manner as orthodox Hindús. It is only in Meerut, Moradabad, and Bijnaur that the Vishnois have in some cases adopted a Musalmáni name, and for this reason, that they were much oppressed by Muhammadans, and at one time nearly exterminated on account of the murder of a Kázi by one of their members. At length, with a view to conciliate the Muhammadans, some adopted Musalmáni

Bishnois.

names, but since the advent of the British power the custom has died out. These people put great faith in the appointment of auspicious moments *(sáat, máhurt)* by Brahmans, and make pilgrimages not only to Nagor but to other places sacred to Hindús. Tombs *(makbira)* are never erected, except in the districts of Meerut, Moradabad, and Bijnaur: in this respect, too, Bishnois imitate Muhammadans in distributing alms at the tomb of a deceased person on the anniversary of his death. This practice also is now passing away, and the salutation "Rám! Rám!" has again taken the place of "Salám" The only new family in the district is that of Shaikh Iláhi Baksh, the Government commissariat contractor, who has amassed considerable wealth during his long and prosperous career.

Iláhi Baksh.

Bála Bái was the daughter of Mádhu Ráo Sindhia. She married Raja Ráj Chandra Desmukh Bahádur, to whom, in the thirty-first year of the reign of Sháh Alam, thirty nine villages were granted by farmán. Raja Ráj died soon after, and in the thirty-sixth year of Sháh Alam's reign (A. D. 1796) the *jágír* was assigned by letters patent to the children of Bála Bái. Shortly after, when hostilities broke out between the British power and Gwaliar in the time of Daulat Rao Sindhia, the *jágír* was sequestered, but on the 30th December, 1803, was again released and assigned by a *sanad* under the hand of General Malcolm, bearing date 18th February, 1804, from which time the *jágír* was uninterruptedly possessed by the Bái Sáhiba until her demise in August, 1833, when it was attached by Government. Of the Bála Bái's 39 villages 36 were situated in the tract comprised in the present district of Meerut, *viz.*, in parganah Meerut 10, in Jalálabad 25, and in Saráwa one. The net demand from these villages was Rs. 75,000, and the collections about Rs. 60,000. Kewal Nain, a dependant of Sindhia's, had seven villages in *jágír* in 1807, but they soon lapsed. The king of Dehli also held ten villages, the Begams of the royal family sixteen villages, and the king of Oudh ten villages, all of which were resumed after the mutiny.

Begam Bála Bái.

The history of Begam Sumru and the Sardhana fief has already been given in detail in the introduction. Here it will be only necessary to briefly sketch the principal events so as to connect them with the local history of the portions of the fief that lie in this district. The founder was Walter Reinhard, a soldier of fortune, infamous for the part he took in the Patna massacre in 1763 A.D. In 1777 he obtained the parganah of Sardhana and the neighbouring lands as an assignment for the support of his battalions. He died there in 1778, and was succeeded by his widow, the Begam Sumru. In 1781 she was baptised under the name of Johanna, and in 1792 she married M. Le Vaisseau, and added Nobilis to her name. Her husband committed suicide in 1795, and for a time she lost all power, which fell into the hands of Zafaryáb Khán, a natural son of Sumru's.

Begam Sumru.

Being restored in 1796 by George Thomas, she continued in sole management of her estate until her death, which took place in 1836. In 1802, five out of the six battalions she entertained joined Sindhia in the Dakhin, but the Begam herself submitted to the British after the battle of Dehli, and ever after remained loyal to them. The Begam's possessions were considerable, comprising parganahs Sardhana, Baraut, Barnáwa, Kutána, Budhána or Burhána, Jewar, Tappal, Dankaur, and Pahásu in the Duáb, and on the western side of the Jumna, Bádsháhpur, Hánsi, and Ránya. The estate was extremely wealthy and well provided with fine towns, such as Baraut, Dinauli, Barnáwa, Sardhana, Jewar, and Dankaur, and close by her dominions were the large marts of Meerut, Shámli, Kándhla, Bágpat, Tíkri, Chhaprauli, Tánda, Khúrja, Shahdara, and Dehli. The net demand of her parganahs in this district alone during the last 20 years of her rule averaged Rs. 5,86,650 including cesses, and her collections during the same period averaged Rs. 5,67,211. Mr. T. C. Plowden, in his settlement report of 1840, bears high testimony to the Begam's energy and ability for administration.

The Begam's possessions.

The Begam's army[1] was composed of infantry, artillery and a complement of cavalry. Three battalions of infantry, 1,550 strong, were usually stationed at her frontier stations, Hánsi and Ránya. The monthly cost of this force was somewhat under Rs. 12,000. All her artillery with some infantry and cavalry were stationed at Sardhana. The strength of her artillery may be inferred from the fact that 236 bullocks were attached to this branch of her army. At the time of the Begam's death her force were commanded by General Regholini and eleven other European officers, one of whom was a son of the celebrated George Thomas.

The Begam's army.

The Begam endowed the Catholic Churches of Calcutta, Madras, Agra, and Bombay with the following sums in Company's rupees respectively:—Rs. 32,000, Rs. 31,000, Rs. 28,700, and Rs. 31,800, and the Sardhana Cathedral with Rs. 95,600; St. John's Roman Catholic College with Rs. 95,600; the Sardhana poor with Rs. 47,800, and the Meerut Catholic Chapel with Rs. 12,500. Besides these donations a lakh of Sonat rupees was made over to the Bishop of Calcutta for charitable purposes. The Begam also subscribed liberally towards Hindú and Musalmán institutions. She had four places of residence, *viz.*, at Sardhana, where her palace was completed in 1834, at Khirwa, at Jalálpur, at Meerut, and at Dehli. Zafaryáb Khan, the son of Sumru, died in 1802, soon after the Begam's restoration by Thomas, leaving one daughter, whom the Begam married to Mr. Dyce, an

The Begam's charitable donations.

Places of residence.

Heirs.

[1] An interesting account of the formation of the regular crops commanded by Europeans in the service of Native States at this time was compiled by Major L. F. Smith of Sindhia's service, Calcutta, 1804. Later on the Begam's artillery comprised 384 gunners and 85 officers of all grades; cavalry, 192 sawárs and 44 officers; orderlies, 192 men and 44 officers; infantry, 1,920 rank and file and 510 officers of all grades. The Begam had 44 pieces of cannon. She kept up a small force at Bhawáni, one of her trans-Jumna towns.

officer in her service. The issue of this marriage was—(1) David Ochterlony Dyce Sombre, who married Mary Anne, daughter of Viscount St. Vincent, by whom he had no issue. He died in Paris in July, 1851. In August, 1867, his body was conveyed to Sardhana and buried in the cathedral. (2) A daughter who married Captain Rose Troup. (3) A daughter who married Paul Salaroli, now Marquis of Briona. The present owner of Sardhana is the Hon'ble Mary Anne Forester, the widow of David Ochterlony Dyce Sombre, and the successful claimant in the suit against Government which has recently been decided in her favour.

Tenant holdings.

The following statement shows the extent of the holdings of peasant proprietors *(khudkásht)*, tenants with rights of occupancy *maurúsi*), and tenants-at-will *(ghair-maurúsi)*. It will be seen how the proportion of the three classes of holdings differs in different parts of the district, and this difference is the more striking in conterminous parganahs, *e. g.*, in the parganah of Garhmuktesar, peasant proprietors cultivate three-eighths of the entire cultivated area, while in the next parganah, Púth, only one-eighth is cultivated by them. Again, the land cultivated by tenants with rights of occupancy in parganah Chhaprauli is to that cultivated by tenants-at-will as three to five, while in Baraut the proportion is as three to nine, and in parganah Meerut as seven to nine. Parganahs inhabited by Játs will be found to have the largest proportion of *khudkásht* area. The average size of the holdings, too, varies very considerably: *khudkásht* holdings vary from five acres in Sardhana tahsíl to eight acres in Ghaziabad, and *maurúsi* holdings from one and three-quarter acres in Sardhana to six and a quarter acres in the Mawána tahsíl. Very many cultivating proprietors have their patch of *khudkásht* or seer land, another patch of which they are tenants with right of occupancy, and a third of which they are mere tenants-at-will :—

Tahsíls.	*Cultivating proprietors.*		*Tenants with rights of occupancy.*		*Tenants-at-will.*		*Fasli years.*
	Holdings.	Acres.	Holdings.	Acres.	Holdings.	Acres.	
Sardhana, ...	15,330	79,244	5,333	9,400	9,614	29,165	1278
Ghaziabad, ...	14,161	110,172	6,151	48,365	9,892	60,208	1276
Meerut, ...	11,683	60,179	10,544	48,226	15,011	61,684	1278
Mawána, ...	7,656	63,940	8,332	50,144	7,148	35,773	1276
Hápur, ...	10,276	69,340	14,060	81,912	9,613	39 822	1278
Bágpat, ...	23,197	122,972	9,450	23,970	17,306	57,088	1278
Total, ...	82,533	504,947	53,870	262,017	68,584	283,940	...

Holdings at fixed rates.

Bilmukta tenures, called in this district *chukauta*, where tenants hold at fixed rates, are not common, and in the foregoing statement are included among tenants with rights of occupancy and tenants-at-will as they happened to fall under either category. Formerly these

fixed rates appear to have been even rarer than they are at present, and now they are not popular. Where these rates are met with it will be found that they depend on contracts continued from year to year. In 1807 ten acres was considered an average holding for a peasant cultivator, it would now be considered small; thirteen acres a middle-sized holding, and nineteen acres, or thirty bíghas, a large holding. Ten acres can be cultivated by a plough with a single pair of oxen, and is called a *kuchcha hal*. For from ten to nineteen acres a *pukka hal* or plough is required, with two pairs of bullocks; generally two superior cultivators keep two pair of bullocks between them. This system is called *dangwára*, and the sharers in the oxen are known as *dangwáris*. A *pukka hal* is supposed to be one and a half times as effective as a *kuchcha hal*.

Size of holdings.

In the following calculation as to the condition of a holder of five acres or eight pukka bíghas in this district, the season is supposed to be a fair one and the land inferior *mattiyár* or good *rausli* irrigated. The market price of grain is taken at Re. 1-8 per maund. If the produce per bígha, during the *rabi*, be eight maunds the bígha, the result for eight bíghas will be grain valued at Rs. 96. As a rule, one-third of the cultivated area is left fallow in the *kharíf*, and the crops are inferior to the *rabi* crops and of less value, whilst on the other hand cotton is a remunerative crop. Sugarcane occupies the ground nearly the whole year, and is only hypothetically a kharíf crop. The produce of eight pukka bíghas, after allowing for fallow, may be set down as worth Rs. 50 for the kharíf, making a total outturn of Rs. 146; against this must be set the outlay on rent, water-rate, seed, implements, &c. The cattle are fed on the chopped straw and stalks of the crops. The rent of inferior *mattiyár* and good irrigable *rausli* is about Rs. 3-12 per bígha, or Rs. 30 for five acres. The water-rate at Rs. 3 per acre amounts to Rs. 15 for the rabi, and, say, one-third of the kharíf is watered, or a total of Rs. 20, and for seed Rs. 5 for the rabi and Rs. 3 for the kharíf, giving a total expendi- of Rs. 58. The profits or net income is therefore Rs. 7-5-4 a month. This does not allow of interest on capital invested in stock and implements. The average of the tahsíldárs' estimates is Rs. 7-12 a month, and the opinion of the late Karím Ali Khán of Gháziabad fixes the profits of a five-acre holding at Rs. 7 per mensem. The gross monthly income of a cultivating proprietor, assuming the land-revenue on fair irrigated land, is Rs. 8 9-4, but from this must be deducted 3 annas on account of village expenses and patwári's fees, thus leaving him a net income of Rs. 8-6 a month. The census statistics of 1872 give the average number of acres cultivatedby each male adult agriculturist at 5·8.

Productive capability of small holdings.

Most of the peasantry are never out of debt from the time they begin life to their death. The cause of this is the enormous rate of interest exacted from them by native mahájans

Condition of the cultivators.

and sahukárs. A cultivator, if not a proprietor, who borrows money for ever so short a period less than a year has to enter into a '*badni siwáya*' contract, by which he engages to give four annas on every rupee borrowed by some certain date within a year, and in addition to this he binds himself to sell his corn to the banker at from one to two sers above the market rate of the day when the grain has been winnowed. Thus on an ordinary loan for six months a cultivator has, as a rule, to pay interest at the rate of 60 per cent. per annum. The cultivators are now so indebted that mahájans have become necessary to their existence. In many villages one mahájan pays over a lump sum to the lambardár on behalf of more than half the small co-partners, from whom he exacts a monstrous interest and eventually takes over their land.

Agricultural labourers.

The census report of 1865 shows a landless unskilled population of 200,000, of whom seven-eighths are Chamárs and the rest are for the most part Koris, Kahárs, Malis, and Kumhárs. Of these it would appear that about 130,000 hire themselves as farm labourers. The census of 1872 divides the agricultural population into landowners and cultivators, already noticed under the head of 'occupation,' and gives no indications by which we may distinguish the farm labourer from the cultivating tenant. But taking the Chamárs, who number 197,273 souls, and other similar castes, there cannot be less than 250,000 persons belonging to the rural labouring population. Many of these till small patches of land on their own account, and only hire themselves out to eke out the resources of their own cultivation. Except in the *zabti* crops, *viz.*, safflower, *gawár*, *chari*, sugarcane, tobacco and cotton, the labourer gets a share of the crop and perquisites. A labourer with a wife and two children gets usually from one-seventh to one-tenth of the crop. If alone, from one-tenth to one-sixteenth. His perquisites are the *hályák*, which is 25 sers of grain per 100 maunds. (This word is probably '*nali ka hak.*') Every day while harvest lasts each labourer gets a *púli* of grain, equivalent to two sers, and every third day a *gaihra*, equivalent to ten sers. On the first day of ploughing in Asárh the labourer gets ten sers of grain called the "*god ka anáj*," so called because the earth is then pricked or furrowed by the plough. If the ground is *do-fasli*, *i. e.*, bears two crops in the year, he gets in Kárttik (October-November) 25 sers more, then called the "*menr ka anáj*," from *menr*, the border furrow of a field. In some villages, too, it is customary to give to the head of the family a loaf of bread every day, and at the end of the year, usually about the end of Kárttik, a *kamal* (blanket) and *chádar* (sheet). When *kapás* or cotton is picked the pickers get either one-seventh or a one-eighth share, and if the crop is small, as much as a quarter share. In gathering *kusúm* or safflower, for every ser picked the labourer gets a ser of barley or maize. For cutting off the leaves of the sugarcane and preparing the stalk for the *gankat* the wages are 16 of the best

Agricultural wages.

canes and as much *agaula* or refuse leaves as the labourer can carry away. For labour in cultivating the *zabti* crops above named the wages are generally in money. If the labour required is only occasional the rates are from two to two and a half annas per diem. If the labour must be continuous, wages range from Rs. 3 to Rs. 4 a month, but more usually the labourer gets Rs. 2 per month and a four-ounce cake of bread per diem, and his wife and children one rupee a month and a three-ounce cake daily each. In harvest time, with grain and *bhúsa* (chaff or straw) the labourers get as much as six annas a day. The first fruits of grain given to Brahmans are called *soári*. The payment in kind to a labourer is called *lái*. The gleanings of a field are the due of the labourers' children *(siliyárian)*. The labourer's duties are ploughing, watching the crops, looking after the cattle, cutting fodder, collecting the cowdung on the land and plastering the zamíndár's house. Women and children are very largely employed in field labour. Játni women with their families work on their husbands' lands, and to this the flourishing condition of the Ját community is in a great measure to be attributed. It is a great pity that Native Christians do not permit their wives to labour in the fields, and a still greater misfortune that they are encouraged in their folly. The women and children of a labourer get half wages.

Condition of the labouring popluation.

The condition of the agricultural labourers has greatly improved. The Chamárs, who were formerly in a state of serfdom, have almost entirely emerged from it. Even now however cases are constantly coming up in magisterial courts showing that the struggle is still going on. Not unfrequently a Chamár or other labourer brings a charge of criminal trespass or assault against his zamíndár with whose family his fathers have been for ages *adscripti glebæ*, on the ground that on refusal to work he was summarily ejected from his house and beaten. The reason of this is that the labourer's social status has been bettered and his wages increased. Mr. Plowden remarks that there can be no doubt that a rise in wages is taking place, and secondly, that there has been a very marked disturbance in the history of prices. The rise in wages may be most clearly seen by taking the comparative earnings of unskilled labour, as unskilled labour is most readily affected by the causes at work to produce a permanent rise in wages. The wages of coolies in this district have increased 133 per cent. between 1858 and 1868, a greater increase than is found anywhere in the North-Western Provinces except in Jalaun. Mr. Forbes has shown that at harvest time the field labourer has received wages in kind equal at market rates to 8 annas a day. This is due to the independence acquired by Chamárs, which permits them to select their own masters, either in their own village or elsewhere. This independence has been brought about by the levelling nature of our legislation, recognizing as it does no distinction in class and applying English principles of law to Indian circumstances and society; secondly, by partition laws

in some degree; thirdly, by our rent laws, which sever the link which bound the zamíndár and his labourers together, and especially by Act X. of 1859, which gave rights of occupancy to many who would otherwise in the ordinary course of things have remained tenants-at-will; fourthly, by the great demand for labour on the Ganges Canal since 1840, and on the lines of railway which meet at Gháziabad; and fifthly, by the impetus given to high farming by the present high price of produce. In 1872 the contractor for the Jumna embankment in the parganah of Loni gave six annas a day to the most able-bodied of his beldárs, who were mostly of the Kori and Kúrmi caste, and four annas a day to the majority of the rest, who are Chamárs. Mr. Plowden writes:—"Last rains and cold weather (1870-71) I passed through a tract of country formerly (15 years ago) wretchedly cultivated, and now brought to the highest pitch of good farming." This tract is one inhabited by Gújars, who have now for many years been showing an aptitude for farming for which they never before received credit. In towns, too, the conditions of artizans and masons has wonderfully improved, though in villages their position is said to be retrograde. Another very important cause of increase of wages must certainly be increase in the price of the barest necessaries of life, for a due supply of food is a condition precedent to the very existence of the labourer.

Rents; money-rates.

The following statement will show the rent-rates of the present settlement fixed, as they are in these villages and generally elsewhere, according to the character of the soil as well as on the fact of the land being irrigated or not. The rent-rates of Sir H. Elliot's settlement based on the irrigation or non-irrigation of the soil are also entered in the statement. For the purpose of drawing a fair comparison, one good level village has been selected from each tahsíl. The enhancement in rents is due to the increased value of agricultural produce, and in a great measure, too, to the fact that land is being constantly brought into the market and sold to money-lenders, who are harder on their tenantry than the old proprietors.

Rates of rent per acre on irrigated and unirrigated land at the present settlement, 1872.

Name of village.	*Irrigated from wells.*									*Irrigated from tanks, &c.*								
	Matyár.			Dákar.			Rausli.			Bhúr.			Matyár.			Dákar.			Rausli.			Bhúr.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Tikri (Parnáwa), ..	8	5	5	5	11	4	5	12	3	5	12	3	7	9	1	4	12	6	5	15	3	5	15	3
Rasúlpur (Meerut),	7	13	6	5	10	10	4	15	3	3	15	6	5	11	6	4	12	6	4	4	8	3	15	2
Masúri (Dásna), ...	4	9	3	3	13	9	3	4	9	1	9	9	3	10	6	4	0	9	2	15	0	...		
Dotai (Garhmuktesar), ..	4	7	3	3	3	9	3	2	3½	3	2	6	3	15	9	3	4	0	3	6	6	3	4	0
Kirthal (Chhaprauli), ...	8	10	6	5	13	6	7	13	3	4	12	0	8	5	3	4	13	4	5	6	9	4	10	8
Parichhatgarh (Kilhor), ...	7	13	6	5	11	6	4	8	5	3	5	4	5	2	0	5	2	3	5	1	6	...		

Name of village.	*Irrigated from canals.*				*Unirrigated.*				*Rent-rates at Sir H. Elliot's settlement in 1836.*	
	Mattiyár.	Dákar.	Rasuli.	Bhúr.	Mattiyár.	Dákar.	Rausli.	Bhúr.	Irrigated.	Unirrigated.
	Rs.a p.	Rs.a.p.	Rs.a.p.	Rs. a. p.	Rs.a.p.	Rs a p.	Rs.a.p.	Rs.a.p.	Rs. a. p.	Rs. a. p.
Tíkri (Barnáwa),	9 6 7	5 7 9	5 6 10	5 6 10	5 2 4	3 10 3	3 12 11	3 2 3	6 6 5	3 8 3
Rasúlpur (Meerut), ...	8 4 6	6 5 0	5 13 9	3 15 6	4 7 0	4 1 6	3 11 0	2 15 3	4 14 6	2 10 3
Masúri (Dásna),	4 0 3	4 4 3	2 15 0	1 9 9	2 12 9	2 8 6	2 1 0	1 7 0	4 0 0	2 5 0
Dotai (Garhmuktesar), ...	4 5 6	3 3 6	3 6 9	2 1 3	2 7 9	2 6 5	1 13 8	1 3 7	3 4 0	1 13 0
Kirthal (Chhaprauli), ...	8 5 3	4 13 9	5 6 9	4 11 5	6 10 0	4 11 9	4 10 2	4 11 9	8 0 0	4 0 0
Parichhatgarh Kithor), ...	6 9 0	4 13 9	4 2 3	4 15 2½	3 2 6	2 0 3	2 5 3	1 5 0	3 9 7	2 0 0

The revenue-rates for each parganah, which are presumably one-half the rent-rates, have already been given. The following table shows the assumed average rent-rate per acre of each parganah at both the past and present settlements :—

Parganah.	*Rent-rate.*		Parganah.	*Rent-rate.*		Parganah.	*Rent-rate.*		Parganah.	*Rent-rate*	
	Former.	Present.		Former.	Present.		Former.	Present.		Former.	Present.
	Rs.a.p.	Rs.a.p.		Rs.a p.	Rs.a.p.		Rs.a.p.	Rs.a p		Rs.a.p.	Rs.a.p.
Bágpat,	2 12 5	4 4 3	Loni,	2 3 3	3 1 3	Jalálabad.	2 9 3	3 13 4	Saráwa,	2 10 5	3 5 10
Barauat,	4 13 3	5 12 10	Barnáwa.	4 9 10	5 2 1	Hápur,	2 12 8	3 7 0	Púth,	2 14 3	3 5 2
Chhaprauli,	5 0 8	6 3 4	Meerut,	3 5 6	4 14 10	Sardhana.	4 9 8	5 2 6	Hastináp ur.	2 11 2	3 12 6
Kutána,	4 14 11	5 8 6	Dásna,	3 0 7	3 15 6	Garhmuktesar.	2 6 4	2 10 6	Kithor,	2 2 1	2 15 0

These rates, being average rates, are only of use in comparing the general rent-rates of the district with other districts. For the ascertainment of the particular rates in each village the No. II. statements of the settlement record must be consulted.

Batái rates.

Elliot in his settlement report, 1836, writes :—"In this district *batái* or division of crops chiefly prevails, and if money rates are in existence they are formed merely by distributing the

Government demand by a *bákh*." At the present time *batái* rates are rarely met with, for where they did exist they were generally commuted into cash payments during the settlement operations of 1864-70. The *batái* rates that do, here and there, prevail are—(1) *adhiá th* or *nisf*, where the zamíndár and the cultivator take one-half each: (2) *bekaid* or *pachá*, where the zamíndár takes two shares out of five; (3) *tihára* or *siwára*, where the cultivator gets two shares out of five; (4) *chawhára* or *chaʾárum*, and so on. Act X. of 1859 has resulted in a general enhancement of rents throughout the district. Since the Act came into operation up to the end of 1871, about 3,000 suits for enhancement of rent have been entered in the Revenue Courts. During the settlement operations, out of 2,039 suits for enhancement of rent, 1,586 were given in favour of the zamíndár against the cultivator, while out of 50 suits for abatement of rent, in 21 cases a decree was given in favour of the cultivator. The smallest share the zamíndár ever gets is one-seventh of the produce. During thesettlement operations, 841 suits were filed for commutation of payments in kind into cash rent-rates. In 612 cases out of these, commutation was decreed. Besides the enhancement cases decided in Court many hundreds of cases have been decided between the parties without the intervention of any revenue officer. Now that the settlement work is completed, very many landlords, whose tenants have obtained for themselves the commutation of payments in kind into cash rates, are suing them for enhancement of rent in the Collectors' courts.

Effect of Act X. of 1859.

The statistics connected with the price of land have been obtained from an examination of the record of cases relating to the change of entry of proprietary right, taken promiscuously from the record-room of the Collector's office and relating only to private sales of assessed land. In forced sales land frequently is disposed of for less than its true value, while in the sale of confiscated land the Government has frequently considered less the value of the land than the services and character of the purchaser. The value per acre of land in 1860, in ten cases examined, averaged Rs. 35-8, in 1865 Rs. 31-6, and in 1871, on a similar inspection of ten cases, Rs. 47-2. In all these cases all the land was cultivated. From the ten sale records of 1871 that were examined, it appears that the value of land is 26½ times the yearly land-revenue.

Value of land.

Attempts have several times been made to gauge the distribution of the produce between the Government, the landholder, and the cultivator. The returns[1] for 1864-65 are considered

Distribution of produce.

[1]The returns for 1865-66 contain an interesting table, compiled by Mr. Parker, C. E., showing the actual weight of the grain, chaff and straw of crops taken from a specified area in 36 irrigated villages in the Meerut Canal Division. As these tables were framed on actual weighment, they forms valuable basis for produce calculations.

untrustworthy in this district, and turning to those for the following year, we find the total cultivated area recorded as 1,058,275 acres, yielding a produce valued at Rs. 1,02,41,758, or Rs. 9-10-10 per cultivated acre. The cultivators' share of this is set down at Rs. 64,64,416, or Rs. 6-1-8 per acre; the zamíndárs' share, including the Government revenue, at Rs. 37,77,342, or Rs. 3-9-2 per acre. Deducting the Government demand, or Rs. 18,27,012, falling at Re. 1-11-7 on the cultivated acre, the balance, or Rs. 19,50,239, at Re. 1-13-7 per acre, will represent the zamíndárs' profit. Comparing these results with the statistics obtained at the census of 1872, we find the average holding of each male adult agriculturist to be 5·8 acres, for which he pays Rs. 3-7-10 per acre to the landowners. The revenue is put down at Rs. 2-1-3 per acre, or with cesses Rs. 2-4-5 per acre, leaving the landlord's profits as low as Re. 1-3-5 per acre. The difference in the incidence of the revenue is due to the fact of the revenue-free cultivated area being included in the former return and the non-completion of the settlement. In 1872 the land-revenue amounted to Rs. 21,84,310, or with cesses Rs. 24,00,920; the amount paid by cultivators in the same year was Rs. 37,41,286. The general result of these inquiries show that the cultivator receives close on twice as much as the Government and the landowner taken together. From this he has to support himself and family, provide seed and implements, and lay by, if he can, for bad seasons.

Unskilled labourers and artizans.

In a former page I have considered the wages of agricultural labourers. I shall now refer to the rise in the wages of unskilled labourers and artizans in connection with the general rise in prices. In a bill submitted for the repairs of the Collector's office, early in 1815, the following rates of wages per diem are entered:—bricklayers 3 annas; coolies 1 to 1½ anna; able labourers and water-carriers 2 annas. Again in September, 1815, I find bricklayers receiving 2½ annas, carpenters 2 annas, and coolies one ser of flour and one pice a day. Flour then cost 2½ pice a ser, so that the coolies, 600 in number, received less than one anna a day. The coolie rate remained the same up till 1850, when it rose to 2 annas a day for a man and one anna for a boy; the ordinary rate for a man is now 2 annas to 2½ annas, and for a boy 1½ anna to 2 annas. In some cases they are able to demand much more. In 1811 pálki-bearers received 3 annas a day, bricklayers 2½ annas, water-carriers, carpenters and beldárs 2 annas, and coolies 1¾ anna. In 1850 the wages of bricklayers rose to 3½ to 4 annas, the rate at present is 4 to 5 annas. The cold-weather rate, while the days are short, is usually 4 annas, and for the long days of the hot-weather 5 annas. In 1850 the daily pay of carpenters and blacksmiths was 4 annas, now the rate is 5 annas. The price of roofing tiles in 1809 was Rs. 120 per 100,000. The rate is now for tiles of the same size Rs. 150. • Since 1809 the price of wrought-iron has fallen from Rs. 25 the maund to Rs. 7-4 for Hindustáni iron, and Rs. 8-8 for

English iron. Bambus are now considerably cheaper than they were fifty years ago. The price of *ghi* or clarified butter, as elsewhere stated, has risen considerably.[1] Mr. Dumbleton, writing in 1809, says:—"The greater part of the *ghi* consumed in these parts is imported from the west side of the Jumna, as is also the salt."

Grinding corn.

Mr. Dumbleton in the same year writes:—"The price usually taken at the mills for reducing grain to *áta* (flour) is two sers in the maund, or five pie. The present rate is six pie per *dhari*, or five sers. Taking 25 sers for a rupee as the present nominal rate, and 35 sers as the nominal rate in 1809, it will be seen that the price of grinding flour has increased 150 per cent. As noticed under the Saháranpur district, the hire of bullocks in 1803 was Rs. 2-8 per mensem, rising in 1805 to Rs. 3-8; it is now fixed at five annas a day for each bullock, or seven annas a day to include return hire. The rates now vary from Rs. 6-8 to Rs. 13 a month, showing the impetus given to agriculture from the protection of a powerful and peaceable Government.

Prices of grain.

In 1804, Colonel David Ochterlony, writing from Dehli, alludes to a prevalent scarcity of grain, and requests Mr. Leycestor, the Collector, to "send, if possible, 50,000 maunds of wheat to Dehli if it can be purchased at a rate which, including carriage, will admit of its being sold for 27 sers the rupee." Writing a few days afterwards, he says:—"The scarcity of grain is very great. Have the wheat sent over on the public account. A measure of this kind can alone alleviate the existing evils." In 1805 wheat sold at 18 sers for the rupee, and gram at 20 sers in Meerut, and the Collector characterises the prices as exorbitant. Again in 1807 the distress was considerable at Meerut, after a very plentiful season in the preceding year. In 1806 (1214 *fasli*) the following were the rates per rupee:—gram, 70 sers; wheat, 50; barley, 80; rice of first sort, 50; rice of second sort, 80; maize, 100; *joár*, 50; *bájra*, 60; and at the close of 1809 gram was 23 sers and moth 42 sers per rupee. Yet, earlier in the year, the Government had been making its collections under the Collector's immediate superintendence at the town of Manglaur, in the present district of Saháranpur, at the following rates:—rice, 100; *úrd*, 80; *joár*, 90; wheat, 60; gram, 60; and barley, 80 sers for a rupee. In 1817 the Collector reports that

[1] An old price list (September 26, 1805) gives the following as the average prices per local maund, for the years 1799 to 1804:—

Dry tobacco, ...	...	...	Rs. 8	Charcoal, ...	...	...	Rs. ½
Hukka tobacco,	...	...	„ 6	Safflower,...	...	...	„ 16
Turmeric, ...	...	...	„ 7	Cotton seed,	...	...	„ ½
Opium, ...	...	...	„ 320	Kapás,...	...	...	„ 2
Sulphur, ...	...	...	„ 14	Blankets,...	...	...	„ 16
Saltpetre (1st)	...	...	„ 3	Hides, ...	...	...	„ 8
Ditto (2nd)	...	...	„ 2	Iron, ...	...	...	„ 7
Country paper,	...	...	„ 27	Jast, ...	...	...	„ 32
Ghi, ...	...	...	„ 11	Lead, ...	...	...	„ 22
Oil, ...	...	...	„ ¼	Zinc, ...			

wheat sold at 19 sers for the rupee and other grain in proportion. The next great season of scarcity was in August, 1819, when the rates were: wheat, 18 sers per rupee; gram, 22; barley, 23; *úrd*, 23; *moth*, 23; *jowár*, 25, and maize, 25; just before the cutting of the *kharíf* (11th August) that year. In 1820 wheat, at Hápur, sold at 18½ sers, at Dásna at 19½ sers, whilst gram at Dásna was 26 sers, *úrd* was 29 sers, and *moth* was 28½ sers for the rupee.

Prices in Gháziabad.

The average price of wheat in Gháziabad from 1831 to 1841 is given in detail under the town notice. It averaged 28½ sers per rupee. Mr. Plowden does not think the rise is of a permanent character, but that the advance in prices which has been so marked during the last ten years is nearly wholly due to the bad seasons of 1860-61, 1865-66, 1867-68, and 1869-70. Up to 1849 it will be found that the average price of wheat was 30·1 sers per rupee, from 1850-59, 36·6, and from 1860-69, 21·3 sers per rupee. The following statement shows the average annual prices of the staple crops of the district from 1850 to 1870 inclusive. A second table gives the monthly average for 1860 and 1868-69.

Price of the principal crops in so many sers per rupee.

Year.	Wheat.	Gram.	Barley.	Indian-corn.	Joár.	Bájra.	Másh.	Múng.	Moth.	Rice.	Gúr.	Oil.	Ghi.	Cotton.
1850, ...	42½	50	...	50	...	...	40	...	...	17	16	12	2¼	4
1851, ...	42½	50	...	...	...	...	...	...	...	18	16	14	2⅝	5
1852, ...	30	34	...	50	...	...	30	...	...	20	11	12½	3½	8
1853, ...	28	25	...	...	...	...	28	...	...	11	17	...	2½	7
1854, ...	35¼	31½	...	...	...	...	27	...	...	17	13¼	8	2⅝	6
1855, ...	47	55	...	...	...	...	...	...	...	24	18	8½	2½	6
1856, ...	38½	38	50	50	50	45	45	50	50	23	18	7½	3⅜	6½
1857, ...	43	44	60	...	...	...	42	35	...	20	13	8	3	4
1858, ...	32	42	40	40	...	...	43	...	...	22	14	8¼	3⅛	4⅜
1859, ...	27	33	35	33	...	...	35	30	...	13	15	8½	2⅜	3⅝
1860, ...	9¼	..	11	10	13	12	10	10	...	11	11	5	2⅜	3⅜
1861, ...	27	24	20	32	...	30	13	13	..	18	9	5½	2½	5½
1862, ...	39	35	65	60	...	...	41	...	...	18	12	4	2½	4½
1863, ...	22	22½	25	25	...	27	25	...	...	16	12	3½	2½	1⅝
1864, ...	22½	25	27½	28	...	...	23	23	...	12	12	6	2½	11 5/16
1865, ...	22	22½	...	27½	...	...	24	27	...	11	16	9	2	3½
1866, ...	22	25	32	30	22½	...	27½	20	...	12	15	8⅜	1⅜	3¼
1867, ...	24	21	33	28	..	...	27	30	25	16	7	6½	1⅜	4
1868, ...	14	14½	20	...	...	...	15	15	...	...	8	6⅜	1½	2
1869, ...	11¼	9½	15	27	...	...	22½	18	...	10	8½	5	1⅜	2½
1870, ...	21	16	35	35	...	...	27½	27	...	14	12	5⅜	1¼	2

Sugarcane.

The rate for *gúr* in 1807 was 18 sers the rupee. The average rate during the past eleven years has been 12 sers. The price of oil has increased to a greater extent, perhaps, than that of any other product. In 1806 *sarson* or mustard-oil was selling at 40 sers the rupee, in 1850 at 12 sers, in 1860 at 5 sers, in 1870 at 5½, and in 1872 at 3 sers the rupee. This is to be attributed in a great measure to the recent blights

which afflict and very frequently utterly destroy the plant. The *tára* species is said to be more affected than the *sarson*.

Famine of 1860-61.

The famine of 1860-61 was, however, terribly severe, and had it not been for the vast railway works then being made in the neighbourhood of Ghaziabad the lives of thousands must have been lost. Near Ghaziabad a mile of high embankment was thrown up by 25,000 famine labourers in six weeks. A good test of the severity of famine is the extent to which cultivators sell their cattle: many thousands of cattle changed hands in the famine year of 1860-61, while in 1868-69 the transfers of cattle may be counted by hundreds. From the following statement it will be seen that the famine of 1868-69 reached its height in December, 1869, when the following rates per rupee prevailed: wheat, 10 sers: gram, 9½; barley, 14; and rice, 9 sers. Besides the fact that rates in 1860-61 were higher than these, it must be remembered that since that period wages have been constantly rising. Prices have returned again to their ordinary rates, *viz.*, wheat, 26 sers per rupee; barley, 33; *joár*, 34; *bájra*, 34; and gram, 25 sers. Famine rates are reached in this district when wheat sells at 16 and barley at 20 sers the rupee, and when wheat sells at 11 and barley at 14 sers the rupee Government relief operations appear to become necessary.

		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Wheat, ...	1860, ...	...	...	25½	20	22½	20	...	11½	11½	9½	10½	...
	1868, ...	26	27½	25	26	28½	27½	26	21	12½	14½	12	11½
	1869, ...	14½	12½	15½	16	18½	16	13	12	11½	11½	11	10
Gram, ...	1860, ...	...	...	31	24½	26	22	...	12	18½	11½	12½	...
	1868, ...	26	24	19	26	29	27½	28	23	13	16	12½	12
	1869, ...	14½	12½	14	15	14	14	11	10½	9½	9	9½	9½
Barley, ...	1860, ...	...	...	32	27	29	24½	...	15	13	10	10	...
	1868, ...	38	33	35	40	42	42½	42	33	16	20	16	15
	1869, ...	18	16	20	24	24	20	15	13½	14	13	10	14
Indian corn,	1868, ...	...	...	...	...	...	...	...	...	...	...	13	12½
	1869, ...	16	14	15	...	...	...	...	...	14	17½	17½	18½
Joár, ...	1860, ...	...	...	27	20	20	19	...	15	13	12	...	...
	1868, ...	...	...	26	...	...	...	...	...	...	...	13	13
	1869, ...	13½	13	14	...	...	...	12½	13½	14	17	20	19
Bájra, ...	1860, ...	...	...	32	18	21	20	...	15	12	12	12½	...
	1868, ...	...	...	28	...	...	...	...	...	...	...	12	12½
	1869, ...	14	13	...	...	...	...	14	...	...	16	...	16
Rice, ...	1860, ...	...	...	7	7	7	6	...	9	9	9	9½	...
	1868, ...	15	12	9	15	17	12	14	18	10	9	8	8
	1869, ...	8½	8	8½	8	7½	8	8	7½	8½	9	10	9

Trade and manufactures.

The only trade returns are those furnished by the octroi statements of municipalities. The imports into Meerut city during 1870-71 were, in maunds, wheat, 221,550; sugar, 38,993;

other grains, 48,093; durgs and spices, 7,788 ; tobacco, 5,127, &c., the octroi duty on which amounted to Rs. 25,644. In Bágpat the income for the same period amounted to Rs. 7,850, of which by far the greater portion was levied on sugar.

The total import of sugar was 351,353 mauuds, valued at Rs. 1,119,350, of which about one-fifth paid duty, the rest being exported elsewhere. The octroi on imports into Baraut was Rs. 4,415, and this was principally on grain. In Ghaziabad the revenue amounted in 1870-71 to Rs. 5,723. A more detailed account is given under each town.[1]

Exports.

Before going into details it will be well to consider to what extent exportation is practicable in the district. The railway fare per maund per 100 miles is three annas, the canal fare[2] is one anna, by cart it is four annas and two pies. If the produce is going over 300 miles the railway fare chargeable is two annas and one pie. The charge therefore for 400 miles is eight annas and four pies. A country cart with four bullocks will carry on a metalled road forty maunds, and the charge per bullock is five annas a day. If wheat were here selling at a nominal price of Rs. 1-8-0, and in the centre of a famine district it were selling at Rs. 2-8-0 the maund, then grain (excluding charges) might be carried nearly 800 miles with advantage by rail, by water 1,600, and by cart 400. But taking into consideration the mean distance between the greatest centre of production and the centre of greatest demand, the above distances should be halved. Then allowing 25 per cent. profit to the carrier and 10 per cent. to the trader, or one-third of the whole item, it will be practically that railways control dearth to a limit of 266 miles, canals and rivers 550 miles, and roads 150. It has in emergent cases been found practicable to send grain to Calcutta, and in the famine years of 1869 and 1873-74 some Calcutta merchants had grain stored as far up-country as Khátauli in the Muzaffarnagar district. The principal articles of export are in sugarcane produce, *gúr* or condensed raw sugar, *ráb* or undrained raw sugar or molasses, *shira*, *khánd* or drained sugar, *shakr*, *chini* and *misri*, which go to Bhawáni, Riwari, Dehli, and Rajputána. Indigo in the shape of *gúdh nil* or kidney indigo goes to the Panjáb, and cake indigo goes to Calcutta. *San*, *patsan*, and *sani* fibres are exported to Bikanír and Bhawáni. Tobacco, both dry leaf and manufactured to suit all classes, is exported to Dehli. Formerly large quantities of saltpetre were exported, but the trade has now altogether declined. There were formerly saltpetre works at Loni, Dásna, Hápur, and smaller ones at Sayána, Makanpur, Faridnagar, Pilkhua, Bagamabad, Muráduagar, and Shamsher. The parganah of Loni derives its name from the Hindi word *lon*, Sanskrit *lavana*, signifying salt. Wheat is exported in the direction of the

[1] See Meerut, Ghaziabad, Bágpat, Hápur, Shahdara, Baraut, and Pilkhua.

[2] In 1820 boat-hire from Garhmuktesar to Cawnpore was Rs. 45-8-0 per 100 maunds, and to Allahabad was Rs. 70-8-0.

greatest demand by rail, or water in excess of the home demand. There are large granaries at Ghaziabad, Náhal, Pilkhua, Hápur, Faridnagar, Begamabad, Shahdara, Murádnagar, Garhmuktesar, Mawána, Bágpat, Baraut, and Meerut. Dásna once had several, but owing to the percolation of canal water they have fallen into ruin. Sardhana has but four or five.

The Chamárs tan hides in this district. After tanning a cow hide is called *chám*, a bullock hide *charsa*, a buffalo hide *adhaura*, and goat and sheep skins *nari*. Leather is best tanned with *dhák (Butea frondosa)* bark, but the bark of the different species of *kíkar (Acacia)* called *kasa* is more commonly used. Hides, horns and hoofs are sent to Calcutta and Cawnpore. There is a great manufacture of native shoes in Shahdara and Pilkhua, the majority of which are exported to Dehli and southwards along the line of railway. The average outturn of cotton in a fair season is 55,000 maunds and of this 20,000 maunds are required for local consumption. The remainder is exported chiefly to Calcutta and Bombay. In bad seasons the produce is little more than sufficient for the requirements of the district: *e. g.*, in 1869-70 the actual outturn was but 27,551 maunds on an area of 43,229 acres. Meerut is a great cotton emporium, and here dealers congregate from other markets, such as Khúrja, Háthras, Cawnpore, and Mirzapur. *Kusúm* or safflower is largely exported to the neighbouring districts. It is not thought profitable to send the district produce to Calcutta to compete with the Bengal flower. Silk has been tried by Mr. Michel of the Dásna factory, but without success, though mulberry of every variety grows luxuriantly. The cause of failure is the hot winds, which the silkworm cannot survive. The heat here is dry, but in the moist and cooler climate of Bijnaur Major Kennedy has been most successful in the culture of the worm. There are six kinds of cloth manufactured in the district, but solely for local consumption; they are: *gárha*, *dosúti*, *tisúti*, red and blue; *kharua*, *dolara*, and *dhotar*, which last is a fine cloth. In 1832 good *gazi* sold at Rs. 5 the 100 yards, and inferior cloth at Rs. 4, while *dosúti* sold for Rs. 8. Oils may be classified as *karwa* and *mítha*. The *karwa* oils are those extracted from *sarson*, or the mustard plant, with adulterations. The *mítha* oils are those extracted from *til* and *tára* with adulterations of many sorts. There is very little *alsi* (linseed) grown. The principal medicinal oils are *nim* oil and an oil extracted from the shank bones of the gigantic crane *(L Argala.)* and other birds of the wader tribe. It is considered a specific for rheumatism and gouty affections. Neat's-foot oil, too, is made in the larger towns. The principal imports into the district are metals of all kinds, salt, piece-goods, Kábuli fruits, spices from beyond the sea, *pán* and drugs.

Indigo factories.

In the Bágpat tahsíl there are indigo factories at Bilúchpura, Amínnagar Sarái, and Bajheri. In tahsíl Ghaziabad at Dehra, Masúri (Dásna factory), Harsawan, Kilhora, Rasúlpur,

and Yakútpur. In tahsíl Hápur at Baklána and Bhímiyári. In the Meerut parganah there is one factory on the Jáni road. In tahsíl Sardhana, near the town, is a small factory. In Mawána tahsíl there are none. Indigo is an old manufacture in this district, especially among the Muhammadan zamíndárs, but it languished soon after the British occupation. Mr. Elliot, writing in 1836, says, "indigo has never been cultivated to any great extent, and in consequence of the failure of the agency houses and the abandonment of the few factories in Púth and Sayána it is now seldom or never cultivated." The manufacture of indigo took no hold until Bengal began to fail in its supply. Not long after the Skinners established the Dehra factory, but never got good prices, seldom above Rs. 135 per maund, until 1863. Prior to this year other small factories had been set on foot in parganah Dásna, and by 1863 the exportation had reached more than 500 maunds, worth about Rs. 6,250: but 500 maunds is a good average for good and bad years. The exports now must be about 60 maunds, worth more than one lakh of rupees. The largest factory carried on under European supervision is at Dásna, which is now fitted to manufacture 500 maunds. The plant for this factory is sown by the tenants of the proprietor, who objects to the system of advances, and seeing that his tenants have no rights in the soil as security for such advances it would be unwise to encounter the risk. The cultivator receives a cash payment for his crop, delivered hitherto at his risk, the rate being about Rs. 20 per 100 maunds of 48 sers net. The rate for plant cut within a mile of the factory is Rs. 18 per 100 maunds. The average yield of plant per acre is above 60 maunds. The cost of production is Rs. 8-4, *viz.*, seed 8 sers, at Rs. 5 per maund, Re. 1; rent at Rs. 3 per acre for one season, Rs. 3; irrigation, Rs. 2-4-0; cutting, cartage and ploughing, Rs. 2.

A factory intending to make 500 maunds of dry indigo must command 20,000 maunds of plant, or the produce of 3,300 acres, and must concentrate its working operations into 60 days, irrespective of time and labour in packing and despatching the dry indigo. The proprietor of the factory must have in his employ 150 carts with 600 bullocks, 100 men for cutting plant, and 250 Bhangís or Mehtars, who alone manipulate the fermentation and precipitation of the granulated pigment in this district. About 68 or 70 men and boys are employed in the operations of straining, pumping, boiling, and subsequent draining off the colour. Another gang of 36 men are employed in pressing, cutting, and stamping, with an auxiliary batch of six boys for the careful stowage of the prepared colour, to await the slow process of drying,—generally two months. Another large gang of labourers is daily required for the removal of the refuse plant called *síti*. This labour requires an organisation and careful administration to prevent any clashing, and it speaks much for the docile and tractable nature of the material employed that such an organisation is capable of being collected at short

notice, and kept at work with regularity, at rates only 25 per cent. above the current rates of labour. Mr. Michel pays his factory servants Rs. 5 a month, and sells flour to them at the factory, at a rate five sers in excuse of the ordinary market rate of the day. This indulgence leaves them no excuse to absent themselves. Besides the above an expenditure of 150,000 gallons of water per day is required to be raised and stored with an unremitting regularity and precision, and in the Dásna factory this is accomplished by five *láos* or buckets working two wells, with a proportionate force of cattle power to secure its supply in a limited space of time, in order to permit of the water cleaning itself of salt and other impurities previous to its being brought into use.

Minor manufactures.

In Bágpat tahsíl, at Daulatpur, *chúrís* (or common glass and paste bracelets worn by women of the lower classes) are made. They are also made in large numbers at Panchi. At Baraut iron vessels of various kinds are made, and at Barwála *charpáis* (or bedsteads) and other wooden articles. At Mandavi Bágpat reed chairs called *mundhas* are manufactured, and at Súb, in parganah Chhapraulí, saws and wood-splitting cleavers. In tahsíl Ghaziabad, at Shikohpur (otherwise Khichara), ornamented elephant goads (*ankus*); at Makimpur and Ghaziabad boots; at Faridnagar *pagrís*, chequered cloth and *balusáhi* sweetmeats, and at Jahángírpur *pagrís* and *dosúti* cloth are made. In tahsíl Hápur, at Bahádurgarh, country stoneware vessels are made, and at the town of Hápur bells and the brass work of *hukkas*. In Meerut parganah there are no manufactures worthy of notice. Elliot in his Glossary writes that "the best *kamals* (country blankets) in these Provinces are made in Alwar and in the neighbourhood of Mírapur in Meerut. The *sansla kamals* of the latter place sometimes sells as high as Rs. 25. It is made of the wool of lambkins shorn about three days after their birth. The *sansla* is from six to eight yards long and about two broad." This blanket is now quite unknown, and the most highly prized blankets in the district are those of Mírapura and Jawálágarh in tahsíl Sardhana. The village of Mírapura turns out about 100 blankets a day. Large numbers of these black blankets are made too at Láwar, in parganah Meerut. At the town of Barnáwa the printing of cloths is carried on to a very considerable extent.

Fairs.

In Bágpat there are no great fairs. The only two worthy of notice are those of Pura and Khekara. In Pura, a Ját village, is a temple of Parasrám. Fairs are held here in Phálgun (February-March) and Sáwan (July-August). The great fair is the one held in Phálgun called Shib Chandra or Shib Rátri, when the temple is sprinkled with water freshly brought from Hardwár and about 20,000 people assemble. The fair at Khekara is held in reverence of Búrha Bába. In the Ghaziabad tahsíl the Sayyid Abdullah Sháh's *urs* is held at Bahta Hájipur in *Rabi-ul-awal* (not a fixed date). The fair is largely attended. At Dásna a large fair,

formerly attended by the Dehli princes, is held in honour of Shaikh Alladiya Makhdum Sháh Wiláyat. A smaller one is held in Asauj (November) and Chait (March), at the Mandir Devi by the Hindús. At Nagla Káshi a fair is annually held, called Káli Devi, in memory of a *sati*. At Bajhera kalán a fair is annually held in May in honour of the Mardín-i-ghaib. At Síkri khurd great fairs are held in honour of Kalika Devi in Chait and Asauj. The offerings amount usually to Rs. 6,500, of which the Gosháins receive one-third and the sharers in the proprietary rights of the village the remaining two-thirds. At Sultánpur a fair is held in Phálgun and is attended by Játs; it is held in honour of Shám Jí. At Asálatpur the Sítla fair is held in Chait and Asauj. In Hápur tahsíl the great *Puranmáshi* fair is held at Garhmuktesar at the end of the month of Kárttik, but no great traffic is carried on. At the town of Hápur the "*Rámlíla*" lasts ten days in Asauj. At Lihsári there is a three-days' fair at the samádh, at the period of Basant Panchmi. In the Meerut tahsíl the *nauchandi*, or new-moon festival, is held for three days, commencing on the second Sunday after the *Holi* festival. There was formerly a temple of Nauchandi Devi here, which was razed by Kutb-ud-dín Aibak 675 years ago, and a dargáh erected on its site about half a mile to the east of Meerut city. There is no trade carried on of any importance. During the Ashara Muharram (first ten days of the Muharram) there are large assemblages at the Karbala. The *Rámlíla* lasts thirteen days, concluding on the tenth day of the last half of Asauj (*Bijaya dasami*). The Tilendi fair is held at the Súraj kund in Meerut on the second day of the first half of Chait, the day after the *Holi*. The Chhariyán festival, commonly called Záhir Díwán, is held on the ninth of the dark half of the month of Sáwan. In the Sardhana tahsíl there are three fairs worthy of notice: (1) at Sardhana in honour of Búrha Bába in March; at Barnáwa, at the Lákhá Mandap, an *urs* is annually held at Sajar; and (3) at Nirpura a fair is held in the month of Jamádus-sáni. In tahsíl Mawána the only important fair is that of Niloha, in honour of Záhir Díwán or Goga Pír, who is said to have been carried into the earth in his chariot. About 25,000 attend the fair, each person carrying a small flag: hence the name *chhariyán* applied to this fair.

Road traffic.

The following statement shows the traffic between Aligarh, Dehli and Meerut by road from 6 A. M. on the 20th October to 6 A. M. on the 20th November, 1871: only such traffic is noted as is lost to the railway, which amounted to Rs. 19,381 for 80 miles, or Rs. 2,422 per mile. This traffic record was taken as follows: Two native writers were stationed on the Hindan bridge near Ghaziabad, over which all traffic to and from the Duáb to the Panjáb crosses; these men relieved each other every four hours in noting on printed forms the details of traffic of every description as it passed up and down to Dehli. A similar party was stationed at Hápur

which noted traffic to and from Meerut. All the details are recorded in the office of the Executive Engineer.

Road traffic between Aligarh, Meerut and Dehli, from October 20th to November 20th, 1871.

Detail of traffic.	Wheeled conveyances.	Goods calculated at lowest class for 80 miles distance.	Passengers at third class.		Total.
			Men or women.	Children.	
Up.					Rs.
Aligarh to Dehli, ...	4,516	Mds. 140,797 Rs. 19,311	27,289 Rs. 33,685	1,239 Rs. 768	53,761
Ditto to Meerut, ...	4,792	Mds. 92,642 Rs. 12,867	11,650 Rs. 14,563	1,076 Rs. 672	28,102
Down.					
Dehli to Aligarh, ...	4,693	Mds. 124,209 Rs. 17,030	29,292 Rs. 36,160	1,235 Rs. 766	53,956
Meerut to ditto ...	4,631	Mds. 76,995 Rs. 10,694	11,515 Rs. 14,394	1,054 Rs. 659	25,747
Total, ...	18,632	Mds. 434,643 Rs. 59,902	79,746 Rs. 98,802	4,604 Rs. 2,865	1,61,569

Railway traffic.

The traffic by rail in goods and passengers for the six months ending 31st December, 1871, to Meerut city was—passengers 32,260; goods, 123,536 maunds: from the city—passengers, 34,674, and goods 67,036 maunds. The traffic to Meerut cantonment comprised 17,684 passengers, and from cantonments 16,963 passengers. From Ghaziabad there were 23,723 passengers and 723 maunds of goods, and to that station 28,395 passengers and 1,126 maunds of goods. The passenger traffic to Begamabad was 6,788, and from it 5,395; the goods traffic was merely nominal. I have been unable to obtain any later statistics from the authorities of the Oudh and Rohilkhand Railway.

Progress of trade.

No large markets or centres of industry have sprung up on the principal route of traffic, nor are there any cases of small railway stations in this district having rapidly grown into seats of commerce, though Ghaziabad is doubtless fast becoming a great emporium, and must eventually materially diminish the importance of Dehli as a mercantile town. A large proportion of the exports of the large villages in the north of parganahs Sardhana and Barnawa, as Salawa, Tikri, and Doghat, is sent from the Khatauli

Railway Station in the district of Muzaffarnagar. The traffic on the rivers Jumna and Ganges is not great, and that on the latter chiefly consists in bringing down wood from the hills near Hardwár. The canal navigation has already been noticed.

In discussing the subject of material prosperity, reproductive accumulations of wealth will only be considered. In reality the mass of jewellery which women may be seen wearing is no evidence whatever of general prosperity. A people who would not hesitate to sell a birthright to celebrate a pompous marriage are not likely, in times of some adversity, ever to have scruples in hiring jewels from the village shopkeeper; and besides this, many of these jewel-bedecked women are loose characters, the vicissitudes of whose profession remove them from ordinary economic conditions. The signs of accumulation of wealth are the increase in the number of cattle, notwithstanding the decreasing necessity for them from the introduction of the canal and railway, and the increase in the number of carts. Mr. Michel, zamíndár of Dásna, has, after some investigation, come to the conclusion that the number of carts in tahsíl Gháziabad has since the introduction of the railway been increased fivefold. When Mr. Michel first entered on his zamíndári in Masúri there were two carts, there are now sixty; in Dásna there were four, there are now one hundred. Doubtless Mr. Michel's large indigo factory has given an impetus to the increase in this case, still the same tendency is everywhere apparent. The better housing of cattle is another sign of prosperity. For the better stalling of cattle and more careful storing of fuel, the area of the Masúri village site has been increased by more than one-third during the last few years. There has also been a general increase in facilities for transport both by carts and beasts of burden, thus permitting of marked competition with the railway. As an example, take the reorganisation of bullock-trains on such long lengths of road as from Gháziabad to Aligarh, parallel with and passing through the same centres of commerce as the railway touches. There is an increase in the demand for imported manufactured hardware, *e. g.*, English pocket-knives, locks, carpenter's tools, anvils, and vices, and bar-iron for ploughshares. The wearing of English cloth is only in a minor sense an indication of general prosperity, for in all towns and at all small village markets *(penth)* English cloth is sold simply because it is cheaper than the native-made fabric. Hoarding does not prevail to the extent it did ten years ago, but still it is now very general. The crisis of 1866 has very seriously affected the estimation in which the English banking system was formerly held. The greater part of the accumulations from banking and commerce is employed as capital in trade, and in large or small indigo factories, and as capital for the purchase of land.

Interest.

The current rates of interest in small transactions, where an article is given in pawn as security, is about half an anna per rupee per mensem, *i. e.*, 37½ per cent. per annum. In large transactions with a mortgage upon moveable property, as carts, cattle, *kolhus*

(sugar mills) about three pies per mensem per rupee, *i. e.*, 18¾ per cent. per annum. In large transactions with mortgage upon house or lands or shares in estates it is 12 per cent. per annum. Petty agricultural advances upon personal security are made at half an anna per rupee per mensem, *i. e.*, 37½ per cent. per annum. The same with lien on crops would be 25 per cent. per annum. Not less than six per cent. would be considered a fair return for money invested in buying an estate with the prospect of improvement confidently expected to continue.

Banks.

There are no large native banking establishments out of the great military station of Meerut in this district and Dehli on the Panjáb side of the Jumna.[1] Market gardeners are the only cultivators that encourage these establishments. In the interior of the district petty Baniyas do all the money-lending. The only English bank in this district is the Bank of Upper India, the head office of which is in Meerut cantonments.

Weights and measures.

The local measures of time in general use are those common to the upper Duáb. Theoretically six *sáns* or breaths make one *pal*, or the twinkling of an eye, and 2½ *pal* one minute English. Sixty *pal* make one *ghari*; 7½ *gharis* one *páhar*; 8 *páhars* one *din* (day); 7 *din* one *athwara*; and two *athwaras* one *pandrawara*. In village parlance the words *sikála*, *tarka*, *bhor* and *din nikale* are used to express 'morning'; from morning until noon as many *páhars* of the day as have passed. After twilight comes *din chhipe*, *shám* and *sanjh*; then *diya jale* when the lamps are lighted, *rát* or night, *pasar* just before daylight when the cows are fed, *píle phatan* the first glimpse of dawn, and *chiriyon ke wakt* when the birds begin to sing. Solid and liquid measures are the same. Eight *khashkhash* (poppy seeds) make one *chánwal* or grain of rice; 8 *chánwals* make one *ratti*; 8 *rattis* make one *másha*; 12 *máshas* make one *tola*; 5 *tolas* make one *chhaták*; 16 *chhatáks* one *ser*; 40 *sers* one maund. Eighty-four Government rupees weigh one ser. The different gradations between the *chhaták* and the *ser* are the *adhpau*, or half a quarter; *pau ser*, or quarter; *sawa pau*, or five-sixteenths; *derh pau*, or three-eights; *adh ser* or half *ser*, and *tín pau*, or three-quarters of a *ser*. *Dhari* or *panseri* contains five *sers*, and the *dhon* is half a maund.

Measures of distance and length have various terms in the lower ranks of the scale: thus, two *jau* make one *angusht*; 4 *angusht* one *chiya*; 6 *chiya* one *háth*, while by another account 3 *angusht* make one *girih*, 4 *girihs* one *balisht*, and 2 *balisht* one *háth*. Again we have 5⅛ *sút* making one *bhao*, 3 *bhao* one *tasu*, and 12 *tasu* one *háth*. Two *háth* make one *gaz*, and 1½ *gaz* one *kadam* or pace:

[1] The average rates of exchange in the early part of our rule were half per cent. on Dehli, two per cent. on Jákhani and Benares, and three and a half per cent. on Calcutta.

2,040 *gaz* make one *gáo kos*, and 2,900 *gaz* one *pukka kos*. The *gáo kos* is so called as representing the distance the cry of a cow (*gáo*) is said to be heard. Other vague terms of distance are *tírwa*, an arrow's flight; and *goli ke tappa*, a rifle-shot. The land measure in common use is based on the English yard of 36 inches; the former local yard was the *Iláhi* yard or *gaz* of 33 inches. Three English yards make one *gatta;* 20 *gatta* one *jaríb*, and a square *jaríb*, or 3,025 square yards, makes a *pukka* bígha, and one bígha twelve biswas equal an English acre. The subdivisions of the *bígha* are 20 *biswás* make one *bígha;* 20 *biswánsís* one *biswa;* 20 *taswánsís* one *biswánsi;* 20 *answánsis* one *taswánsi*, *&c.*

Coinage.

In 1840 the East India Company's gold double and single mohars were current in this district, besides two-third and one-third mohars in gold, the Calcutta sikka mohar (19th *san*) and the Farukhabad mohar (45th *san*). The Company's silver double, single, half and quarter rupees, and the Farukhabad (old and new), Calcutta sikka, Benares, old Lucknow (known as *Machhli Sháhi*), Muhammad Sháhi, Dehli, Bareilly, Najíbabad, Chandausi, Bála Sáhi, and Srinagari rupees were all current and caused endless confusion in commercial transactions. For the copper coinage there were the Company's new anna pieces, the Mansúri or Masúri káni, lumps of copper, and the *kuldár*, Madu Sáhi and Trisula pice. The coinage now in circulation is that common to all India.

Land-revenue.

The classification of the land into assessable and revenue-free, with the Government revenue and its incidence on the cultivated area, has already been given in detail for each parganah in the district. The collections and balances from 1860-61 to 1873-74 have been as follows :—

Year.	Demands.	Collections.	Balances.	*Particulars of balance.*		Nominal.	Percentage of balance on demand.
				In train of liquidation.	Irrecoverable.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1860-61, ...	17,82,599	15,41,663	2,40,936	2,10,413	29,951	572	13·51
1861-62, ...	18,11,172	18,03,428	7,744	2,871	4,127	746	0·42
1862-63, ...	18,15,598	18,07,331	8,267	52	8,215	...	0·45
1863-64, ...	18,21,128	18,07,096	14,032	6,635	...	7,397	0·77
1864-65, ...	18,24,442	18,17,909	6,533	262	...	6,271	0·36
1865-66, ...	18,26,249	18,18,482	7,767	92	...	7,675	0·42
1866-67, ...	18,25,521	18,16,716	8,805	...	998	7,807	0·48
1867-68, ...	18,15,554	18,00,828	14,726	294	280	14,152	0·81
1868-69, ...	18,03,994	17,56,257	47,737	10,459	...	37,278	2·09
1869-70, ...	17,83,965	17,60,405	23,560	6,085	...	17,475	1·32
1870-71, ...	17,67,084	17,51,998	15,086	...	...	15,086	0·85
1871-72, ...	1,97,1,663	19,57,885	13,778	5,451	8,325	...	0·70
1872-73, ...	21,75,643	21,72,112	3,531	1,625	43	...	0·16
1873-74, ...	21,77,586	21,76,868	1,718	...	973	745	0·08

Expenditure.

The total revenue and civil expenditure for 1804 was revenue, Rs. 2,50,749; expenditure, Rs. 1,41,104; for 1850-51 the figures were Rs. 19,27,409 and Rs. 12,01,129 respectively; for 1860-61, Rs. 24,59,409 and Rs. 13,36,751; and for 1870-71, Rs. 38,04,485 and Rs. 15,88,080. In the following detailed list of items for 1860-61 and 1870-71 military expenditure and deposits are excluded:—

Receipts.			*Expenditure.*		
Heads.	1860-61.	1870-71.	Heads.	1860-61.	1870-71.
	Rs.	Rs.		Rs.	Rs.
Miscellaneous, as police Funds, savings of pay, &c.	30,877	36,388	Salaries of all kinds and contingencies, ...	5,05,831	5,36,469
Land-revenue, ...	17,72,801	21,18,109	Public works, ...	6,67,906	5,68,498
Excise, ...	81,070	1,18,072	Excise, stamps & opium,	23,033	9,186
Stamps, ...	94,022	1,52,346	Post-office, ...	32,236	37,601
Law and justice, ...	25,626	82,932	Telegraph, ...	...	19,165
Income-tax, ...	1,20,293	1,88,100	Local funds, ...	...	4,17,161
Local funds, ...	25,465	4,54,245	Compensation for loss of property.	1,07,745	...
Canal collections, ...	1,15,184	48,850			
Post-office, ...	99,226	...			
Telegraph, ...	3,699	5,980			
Rent of confiscated lands,	91,226	...			
Total, ...	24,59,489	32,05,022	Total, ...	13,36,751	15,88,080

Income-tax.

The actual assessment of the income of the district at six pies in the rupee calculated upon profits exceeding Rs. 500 for the purposes of the income-tax of 1870 during 1870-71 was Rs. 1,88,099. There were 2,372 incomes between Rs. 500 and Rs. 750 per annum; 1,186 between Rs. 750 and Rs. 1,000; 459 between Rs. 1,000 and Rs. 1,500; 350 between Rs. 1,500 and Rs. 2,000; 522 between Rs. 2,000 and 10,000; 17 between Rs. 10,000 and Rs. 1,00,000; and one above Rs. 1,00,000;—total persons assessed were 4,907.

Excise.

The following statement shows the collections under each head of the excise for ten years in this district:—

Year.	License fees for vend of spirits.	Duty on spirits.	Opium.	Madak.	Tári.	Intoxicating drugs.	Fines, &c.	Gross charges.	Net receipts.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1862-63, ...	834	12,193	30,922	...	...	2,589	...	2,505	44,033
1863-64, ...	4,734	9,258	32,859	...	3	2,503	...	1,053	48,304
1864-65, ...	7,781	8,814	42,812	...	25	2,743	630	23,755	39,050
1865-66, ...	8,917	9,239	38,194	...	...	2,441	96	27,188	31,699
1866-67, ...	9,094	11,088	39,600	...	23	2,275	13	27,299	34,784
1867-68, ...	14,655	11,818	48,540	16	...	2,737	296	28,298	49,764
1868-69, ...	14,133	8,308	47,744	66	11	3,080	101	28,066	45 377
1869-70, ...	1,293	7,199	48,649	80	29	3,079	59	27,917	32,462
1870-71, ...	6,240	8,095	53,552	1,009	1,460	7,425	9	30,041	48,649
1871-72, ...	12,507	8,834	53,568	2,550	1,838	8,951	43	30,111	58,180

The cantonment accounts are separate and under a separate administration, and are given below : —

Year.	License fees for vend of spirits.	Duty on spirits.	Opium.	Madak.	Tári.	Intoxicating drugs.	Fines.	Gross charges.	Net receipts.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1862-63, ...	1,911	32,687	...	192	3,781	5,716	...	2,370	41,917
1863-64, ...	20,413	21,564	7,514	480	53,364	3,389	4	1,862	51,502
1864-65, ...	32,921	19,268	...	639	2,749	8,009	...	2,425	61,161
1865-66, ...	30,162	20,423	...	662	1,597	5,904	11	3,261	55,498
1866-67, ...	27,426	23,440	...	665	1,853	4,326	55	3,900	53,865
1867-68, ...	26,190	20,837	...	1,057	1,832	6,644	27	1,619	54,968
1868-69, ...	34,666	22,576	...	1,402	1,975	8,121	20	2,864	65 896
1869-70, ...	1,194	19,650	...	1,802	1,528	6,570	25	2,817	27,962
1870-71, ...	19,215	20,790	...	...	...	...	10	3,809	36,206
1871-72, ...	26,520	20,122	...	...	...	...	24	2,929	43,746

In 1855-56 the gross revenue from spirits, drugs and opium from both cantonments and district was Rs. 75,751, which fell to Rs. 65,847 in the following year, rising to Rs. 82,279 in 1861-62. In 1816 Mr. Colin Shakespear writes: "I think that thirty sers per mensem of opium will suffice for the consumption of the district. The opium now smuggled into the district from Begam Sumru's country is much adulterated and sells at Rs. 5 to Rs. 7 per ser." In 1821 the Collector estimated the annual consumption for the district at five maunds only. The average annual consumption in 1871-72 was 85 maunds.

Stamps.

Stamp duties are now collected under the General Stamp Act (XVIII. of 1869) and under the Court Fees Act. The following statement shows the revenue and charges under this head for a series of years :—

Year.	Adhesive stamps and húndis.	Blue-and-black document stamps.	Court-fees.	Duties and penalties valued.	Total receipts.	Gross charges.	Net receipts.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1862-63, ...	9,704	81,266	...	880	91,850	5,192	86,658
1863-64, ...	14 334	95,387	...	1,424	1,11,145	6,109	1,05,036
1864-65, ...	17,492	91,489	...	937	1,09,918	6,209	1,03,709
1865-66, ...	14,979	94,884	...	816	1,10,679	7,418	1,03,261
1866-67, ...	5,687	96,796	...	462	1,02,945	6,695	96,250
1867-68, ...	5,480	1,40,381	...	421	1,46,282	11,341	1,34,941
1868-69, ...	5,499	1,41,938	...	189	1,47,626	9,914	1,37,712
1869-70, ...	5,676	1,73,178	...	395	1,79,249	10,055	1,69,194
1870-71, ...	5,791	29,700	1,16,853	3,305	1,55,649	11,849	1,43,800
1871-72, ...	5,677	29,422	1,16,895	196	1,52,160	4,691	1,47 469
1872-73, ...	4,386	28,081	1,19,289	209	1,51,965	3,504	1,48,461

The net revenue for 1855-56 was Rs. 55,509 ; for 1857-58 was Rs. 12,779 ; for 1859-60 was Rs. 581,930 ; for 1860-61 was Rs. 1,01,921, and for 1861-62 was Rs. 71,924.

Registration.

In 1871-72 there were 6,287 documents registered under the provisions of the Registration Act, VIII. of 1871, on which fees to the amount of Rs. 15,668 were collected. The expense of establishment, &c., during the same period amounted to Rs. 6,359. There were 3,750 registrations affecting immoveable property in which the registration was compulsory under Section 17 of Act VIII. of 1871, and 1,165 in which the registration was optional. The other registrations effected refer to moveable property, wills, &c., and the total aggregate values of all the documents registered amounted to Rs. 23,98,172.

Canal-revenue.

The following statement shows the receipts and charges on account of canals for a series of years :—

Year.	Ganges Canal.				Year.	Eastern Jumna Canal.			
	Collections.	Patwaris' fees.	Establishment.	Net receipts.		Collections.	Establishment.	Patwaris' fees.	Net collections.
	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1866-67, ...	3,01,806	1,839	1,237	2,98,730	1866-67, ...	58,154	593	153	57,408
1867-68, ...	3,12,210	2,596	1,149	3,07,465	1867 68, ...	1,79,464	685	166	1,78,613
1868-69, ...	3,03,760	3,155	1,391	2,99,214	1868-69, ..		Not given		
1869-70, ...	5,29,071	3,172	1,383	5,24,516	1869-70, ...	2,01,187	660	336	1,99,191
1870-71, ...	3,75,625	14,676	1,973	3,58,976	1870-71, ...		Not given.		
1871-72, ...	3,80,102	11,527	1,2·5	3,67,310	1871-72, ...	1,55,312	486	4,854	1,49,972
1872-73, ...	3,05,163	15,193	1,753	2,88,617	1872-73, ..	1,85,816	485	8,652	1,76,679

History.

As in Saháranpur so in Meerut, the earliest monument connected with its history is an Asoka column, now on the ridge at Dehli. Shams-i-Siráj relates[1] that this pillar once stood in the vicinity of the town of Meerut and was conveyed to Dehli by Sultan Fíroz, by whom it was re-erected in the Kushak Shikár. He adds that after the erection of the pillar a large town sprung up, and "the Kháns and Máliks of the court built houses there." The Meerut pillar, as noted by the chroniclers, is smaller than the *minár i-zarín* or Saháranpur *lát*. The whole length is about 32·6 feet, and as the end of the shaft is still rough, it seems probable that the polished portion could not have been more than 32 feet in height. General Cunningham makes the upper diameter of the smooth portion 29·5 inches, and the lower diameter 38 inches, giving a diminution in thickness of 0·2 inch per foot. The Kushak Shikár of Fíroz Sháh has been identified with the place where the pieces of the broken pillar were found, corresponding with the above measurements. Padre Tieffenthaler, who resided in India[2] from 1743, writes of this column:—

[1] Dowson's Elliot, III., 353 : Cunningham Arch. Sur., I., 168. [2] Bernoulli, I., 129, Berlin, 1791.

" L'obélisque de Feros, roi des Afgans, qui précéda Tamerlan de 150 ans, etoit de forme cylindrique et posé dans un endroit élevé, sur un pedestal (ou socle) quarré construit d'immenses pierres. On a faité sauter en l'air ce monument avec de la poudre ; il se rompit en plusieurs morceaux dont cinq sont encore existans. Le plus gros de ces fragmens et en même tems celui qui est le plus proche de la base, a 1¼ aune Indienne en diametre, et il est long de 2¼ aunes. Le second n'est gueres moins épais, mais sa longueur n'est que de 1¼ aune. On y remarque des caracteres Indiens, Samscrétans, de Guzarate et quelques peu d'Arabes. L'épaisseur du troisieme fragment est d'une aune ; sa longueur de 2. L'épaisseur et la longueur de quatrieme sont les mêmes que du troisieme. Le cinquieme enfin a moins d'une aune en diametre et n'est long que d'une aune et demie. Les longueurs ou hauteurs de ces différens débris ajovtées ensemble sont 9 aunes ; mais on assure que la hauteur de l'obélisque entier a été de 20 aunes." This account identifies this broken pillar with one of those erected by Fíroz Shah, and as it is clearly not the golden pillar, it must be the one brought from Meerut. The pillar lay in fragments[1] until 1867, when they were again collected together and re-erected on the ridge which runs from the Dehli monument to Hindu Rao's house.

The inscription on this pillar, like that on the golden *lát*, for a long time remained undecyphered, until James Prinsep discovered that it was merely a transcript of the same Asoka edict found on the other pillar. The letters are very imperfect, owing to the surface of the stone being much worn and mutilated, but Prinsep pronounced[2] them so completely duplicates of the other inscription that he did not think it "worth while to make them the subject of a separate note." The Jesuit padre has some curious disquisitions on the inscriptions on this pillar. Having drawn the forms of some eight of the characters he proceeds to explain their meaning : "Après avoir beaucoup et long tems cherché Jai trouvé la signification de ces caracteres. Ce sont en partie des signes numériques, en partie des figures d'instrumens de guerre, dont les Indiens se servoient autrefois." Some he likens to the figures 4, 8 and 6, and others to the emblems of various deities, and winds up with a correction of previous writers :—"De ce que ces caracteres ont de la resseroblance avec des caracteres grecs, quelques Européens ont cru que cet obélisque avoit été élevé par Alexandre le Grand ; mais c'est une erreur : car Alexandre na pas pénétré jusque dans ces contrées et on sait d'ailleurs positivement que le monument dont il est question a été taillé et érigé par ordre et aux fraix de Féros, dans l'intention de transmettre sa mémoire et son nom á la postérité." So whilst avoiding one error the padre falls into another. The existence of this pillar and the discovery of Buddhist

[1]The piece containing the inscription was sawn off some time before and sent to the Asiatic Society in Calcutta, by whom it was again returned to Dehli. [2]J. A. S., Ben., VI., 794.

remains within the city leaves little room to doubt that Meerut was inhabited in the third century before Christ. No mention however of the place is made by the Chinese Buddhist travellers, and this may possibly point to its decay during the early centuries of the Christian era.

Tradition.

Local tradition shows that in the eleventh century the prevailing tribe to the north was the Tagas. These were driven to the south and east by the Játs, who entered the district to the north-west and thence spread themselves over the parganahs that they now occupy. To the south were the Meos, and to the south-west were the Dors whose leader, Hardatta, built a fort at Meerut. The Dors were, in turn, expelled by the Gahlots with the aid of the Mína Meos. Rashíd-ul-dín quoting Al Birúni, a writer of the tenth century,[1] mentions Meerut in his itinerary as ten parasangs from Ahár and ten parasangs from Pánipat. In the romance of the prince of martyrs, Sálár Masaúd, who is said to have been the first of the Musalmán invaders of India, mention[2] is made of his capture of Meerut in the first half of the eleventh century. He led his army from Dehli to Meerut. "The princes of Meerut had already heard that no one could hope to stand before Masaúd; that in whatsoever direction he or his troops turned they gained the victory. So they were afraid and sent ambassadors with valuable presents to Masaúd, acknowledging his supremacy and offering to be the servants of his slaves—in fact submitting entirely to him. Masaúd was much pleased, and bestowing the kingdom of Meerut upon them proceeded with all his train to Kanauj." Firishta says that Mahmúd, whilst on his ninth expedition, invaded Meerut (1017 A. D.) and exacted from Hardatta a large sum of money, but regarding this expedition there is such confusion amongst the authorities that it is very difficult to arrive at any distinct conclusion.[3] The first undoubted Musalmán invasion is connected with the raid of Kutb-ud-dín Aibak, the slave general of Muhammad Sám, in 1191. A.D. Kutb-ud-dín marched from Kahrám, "and when he arrived at Meerut, which is one of the celebrated forts of the country of Hind, for the strength of its foundations and superstructure, and its ditch which was as broad as the ocean and fathomless, an army joined him, sent by the dependent chiefs of the country." The fort was captured and a kotwál was appointed to take up his station in the fort, and all the idol temples were converted into mosques[4]. A mosque built by the conqueror bears his name to the present day.

The notices of the district in the Persian historians are few and unimportant. In 1255 the fief of Meerut was conferred on Malik Kishli Khán Ulugh Aazzam Bárbak-sultáni upon his coming from Karra to pay his respects to the

[1] Dowson's Elliot, I., 62. [2] *Ibid* II., 519 [3] See Dowson's Elliot, II, 458.
[4] *Ibid*, 219, 297, 300.

Sultán[1]. We next read of the troubles caused by the turbulent Meos in the south of the district, and in 1389 A.D. the fort of Meerut was used as a state prison by Muhammad Shah for his rival Abu Bakr, who died there.[2] The autobiography of Tímúr and the *Zafar náma* of Yazdi give a graphic account of the Mughal invasion of the Duáb and capture of Meerut in the latter part of 1398 A. D. Marching from Kaithal, Tímúr came to Pánipat, and thence by Kánhi-gazín to the Jumna, where he discovered on the opposite side the fort and town of Loni then held by one Maimún on behalf of Sultán Mahmúd.[3] He describes Loni as situated "in a duáb between two rivers, the one the Jumna and the other the Halín, the latter being a large canal which was cut from the river Kalíni (Jumna) and brought to Firozabad, and there connected with the Jumna by Sultán Firoz Shah." Here he confuses the history of the Western and Eastern Jumna Canals. The garrison appear to have been Hindús attached to the faction of Mallu Khán, the Hindú minister of Mahmúd Sháh. Pasture being scant on the Dehli side of the river, the Mughals crossed the Jumna whilst Maimún made preparations for resistance. Tímúr relates that a holy Shaikh came out of the town and represented that he had used his utmost endeavours to induce the people to surrender, but that they had remained obstinate. Tímúr accordingly ordered an assault, which was successful. "Many of the Rajpúts placed their wives and children in their houses and burned them; then they rushed to the battle and were killed." Tímúr goes on to relate how he gave orders for the safety of all Musalmáns and the indiscriminate slaughter of all the Hindús in the town and fort. Hence he marched along the Jumna and took up his quarters opposite Dehli. This was the scene of the massacre of his prisoners. Tímúr relates that his principal officers represented that they had 100,000 prisoners in camp, and that in the event of all the forces being required to attack Dehli, they would find it difficult to prevent assistance being given to the enemy by the prisoners; thereupon Tímúr ordered that all the prisoners should be massacred, and so much was this in consonance with the advice of his spiritual counsellers that we read of a holy maulvi, "who had never killed a sparrow in his life," slaying with his own hands fifteen Hindús who had been assigned to him as captives and as his portion of the spoil.

Capture of Loni by Tímúr.

After the capture and sack of Dehli Tímúr encamped at Firozabad, and thence crossing the Jumna marched for six *kos* to Múdúla, which may be identified with the village of Mandaula in parganah Loni. Then he marched five or six *kos* to the village of Katah or Kanah, indentifiable with the modern village of Katah in the Bágpat parganah. There he received Bahádur Náhir, Raja of Kutila (Hardwár), and his son Kalnásh (elsewhere called Mubárak Khán), and accepted of their presents and homage, but this availed them little when Tímúr attacked their country.

Sack of Meerut.

[1] *Ibid*, 4. [2] Dowson's Elliot, IV., 25. [3] *Ibid* III., 432, 495; IV., 34.

From Katah Timúr proceeded six *kos* to Bágpat, and thence to Asár, which he describes as situated "in a part of the country called duáb." There he heard of the strength and importance of Meerut, then held by Ilyás Afghán and his son Maula Muhammad Thaneswari,[1] assisted by a body of *gabrs* under one Safi. Timúr first sent a party offering terms to the place if the inhabitants showed due submision and obedience, but the ambassadors returned unsuccessful with the reply "that Tarmsharin Khán, with a host beyond all number and compute, had assailed their fort, but had retired from it baffled." Enraged at this defiant reply, Timúr started the same day with 10,000 picked horsemen, and halting but one night on the road accomplished the twenty *kos* from Asár and arrived at Meerut on the 29th Rabi-ul-akhir (7th January, 1399). He at once set his men to sap the foundations of the walls, which so dispirited the garrison that the assault was soon ordered. The Mughals with the aid of ladders and ropes mounted the walls and entered the fort. They then spread themselves in the interior and captured the Afghán leaders. Safi, who had fought well, was killed, and the Mughals "put all *gabrs* and people of the place to death. Their wives and children were made prisoners and all their property was plundered." The wood used to prop up the mines was then set on fire, and the fortifications of the city and the houses of the people were razed to the ground.[2] Timúr's last act was to cause the prisoners to be flayed alive and to order the destruction of the public buildings. From Meerut one wing of the victorious army, under Amír Jahán Sháh, was despatched up the Jumna with orders "to take every fort, town and village he came to, and to put all the infidels of the country to the sword." A second division with the heavy baggage took the route by the Kárasú or Hindan, whilst Timúr himself proceeded towards the Ganges. The first day he marched to Mansúra, a distance of six *kos*, most probably to be identified with the village of Mansúri beyond Inchauli on the Niloha road. He arrived the next day at Firozpur, and went thence for fifteen *kos* to Tughlikpur. I have identified the latter place with Tughlikpur in the Muzaffarnagar district. Firozpur is described by Timúr as lying on the banks of the Ganges where there was a ford, for a portion of his troops were able to cross the river close to the main camp. The position of the village of Firozpur Saifpur to the north of Bahsúma and on the right bank of the Búrh Ganga both in name and position corresponds

Timúr's raid.

[1] Thornton notes that Ritter and others suppose the *gabrs* mentioned here were magi or fire-worshippers; "but *gabr* in Persian means any infidel, and the assemblage of *gabrs* at Hardwár, their worship of a rock hewn into the shape of a cow, their suicide by means of fire and their hrowing the ashes of the dead into the Ganges would indicate their Hindú origin and Brahmanical faith." Amongst the 'others' may be mentioned Sir H. M. Elliot (Beames' Elliot I, 119; Dowson's Elliot, V, 559; IV, 506), who identifies these *gabrs* of Meerut with colonies of fire-worshippers established in Upper India."

[2] Dowson's Elliot, III, 451,506; V, 485.

with the Firozpur of Timúr. This, if admitted, will go to show that the recession of the Ganges from its old bed has taken place since 1400 A.D. The onward course of the Mughal army is noticed, under the districts of Muzaffarnagar and Saháranpur[1].

After the departure of Timúr Meerut became the head-quarters (March, 1399) of Sultán Násir-ud-dín Nusrat Sháh, who was joined here by a small force under Adil Khán. The Sultán took possession of the camp-equipage of Adil Kháu and proceeded to Dehli. In all districts visited by the Mughals there was great pestilence and famine after their departure[2]. In 1542 A D., during the reign of Sher Sháh, whilst that Sultán was engaged in the siege of Kalinjar, one Alam Khán Miána created a disturbance in the duáb, and having raised the province of Meerut, he devastated the greater part of the neighbouring country.[3] Alam Khán was slain by Bhagwant, the slave of Khawás Khán, governor of Sirhind, whither he had gone with his Meerut levies on a plundering expedition. Shortly before the accession of Bahlol Lodi, the entire country from Sambhal "to the ferry of Khwaja Khizr, which adjoins Dehli," was held by Darya Khán Lodi, and Niamat-ulla mentions the parganah of Loni as his western boundary. Lying near the imperial residence, Meerut was a favourite place of resort for the nobles of the court, who frequently enjoyed the pleasures of the chase in the Jumna *khádir*. In the reign of Akbar the present parganah of Meerut became the head of a dastúr in the sirkár and súbah of Dehli. Numerous pleasure gardens and hunting preserves were established by the successors of Akbar in parganah Loni, and to water the grounds of one of these, known as Ránap, the Eastern Jumna canal was first designed. The general history of the upper duáb includes the history of this district and has been given in the introduction. In 1778 Walter Reinhard, *alias* Sumru, settled at Sardhana, and in 1781 occurred one of the most destructive of the Sikh invasions. Mirza Shafi Khan was sent to expel them and after several ineffectual skirmishes brought them to a general action on the 15th August under the walls of Meerut. He attacked the Sikhs with great energy and resolution, and the imperial troops, remembering their disgrace of the previous year in the Panjáb, exerted themselves to make amends for their former defeat. Success crowned their efforts, and Sáhib Singh with other commanders of note and five thousand men fell on the spot. The Sikhs retired across the Jumna, and the people were relieved from the presence of a cruel and implacable enemy, who had ravaged their country for several months.[4] In 1783, Zain-ul-abdín, the brother of Mirza Shafi, was governor of Meerut, and when the Mirza was assassinated, the emperor became desirous of removing him from office and directed his appearance

[1] There is a second Firozpur to the north in parganah Bhúma Sambalhera of the Muzaffarnagar District which some think is the village intended by Timúr. Dowson's Elliot, IV, 36.

[3] *Ibid*, 407. [4] Francklin's Sháh Alam, 94, 114.

at court. At first Zain-ul-abdín refused to obey and prepared for resistance Afrásyáb Khán was sent to compel his obedience and invested Meerut, when negotiations were opened which led to the unconditional surrender of the town.

Ghulám Kádir.

It was to Meerut that Ghulám Kádir retreated when pursued by the Marhattas after his outrage on Sháh Alam. Rána Khán with Ali Bahádur, another Marhatta leader, invested the town, which was garrisoned by a strong force of Rohillas who had remained faithful to their leader. Rána Khán, not having any heavy artillery, was prevented from forming a regular siege; he, therefore, drew a line of circumvallation around and blockaded the fort and thus cut off the supplies, so that the garrison began to suffer and to grumble. Ghulám Kádir endeavoured by repeated sallies to animate his troops and drive away the besiegers, but finding all his efforts fruitless, and the garrison having become mutinous, he determined to escape. Attended by 500 horse, who were still attached to him, he, at their head, rushed out of the fort and charged the enemy so vigorously that though every effort was made to take him prisoner, he escaped with a large portion of his followers. But, at length, even these deserted him, so that, in a short time, he was left alone, and to complete his misfortunes, he fell into a well-run, and in his fall suffered a contusion which, for a time, rendered him insensible; there he was discovered by a peasant and delivered up to the Marhattas. His subsequent punishment at their hands has been related elsewhere.[1] From this time until the British occupation the district remained in the hands of the Marhattas. Up to 1818 A.D. it was styled the southern division of Saháranpur, and in that year was made a separate charge. The history of the changes that have occurred in its constitution has already been given, and until the mutiny there is nothing worth recording here, for the events that occurred related principally to the civil and fiscal administration, and are given under their proper heads. I shall now turn to the story of the mutiny and give it from the official records of the time.

The mutiny.

All accounts of the mutiny[2] agree as to one fact, that in the early part of 1857 there were disquieting rumours afloat in the bazars and amongst the native troops, especially those regarding the use of polluting grease in the preparation of the new cartridges about to be issued to the troops, and the mixture of ground bones in the flour sold in the bazars, by which it was said that Government intended to destroy the religion of

[1] Francklin's Sháh Alam, 183. The peasant's name was Bhíka Rám; he received the village of Timakiya in this district, and Imlahra and Oghipur in the Aligarh district, still held free of revenue by his descendants.

[2] From the official report of Mr. Fleetwood Williams, C.S., and Major Williams, the former Commissioner of the Division, and the latter Commissioner of Military Police. I have confined myself to these local accounts, leaving the general history of the revolt to be gathered from Sir J. Kaye's work and the numerous narratives that have been published at various times.

the people. Early in April a *fakír* riding on an elephant and attended by a few horsemen and a number of native carriages came into the city and was visited by several of the native troops. He was ordered to leave the station, but is said to have been for some time concealed in the lines of the 20th N. I. After some consideration it was resolved to test the spirit of the men by ordering the troopers of the 3rd Bengal Cavalry to use the new cartridges. A trooper by name Brijmohan announced to his comrades that he had used them, and that all would have to do so. The result was that Brijmohan's house was set on fire on the 13th of April, and from this date incendiary fires became frequent. The 23rd of April was fixed for a parade of the 3rd Cavalry, and on the preceding day the troopers, both Hindú and Musalmán, bound themselves by an oath not to use the cartridges when called out for exercise. The skirmishers of the regiment refused to take even the cartridges that they had been accustomed to use for years. These men were arrested and tried by court-martial, and on the 9th of May eighty of them were condemned to ten years' imprisonment and five men to five years. The prisoners were at once deprived of their arms and uniform and lodged in the new jail near the Suraj Kund under a guard of the 20th N. I. It is said that their comrades first thought of trying the effect of an appeal to the legal authorities, and subsequently of a petition to Government, but, whether this be true or not, they resolved about noon on Sunday, the 10th May, to have recourse to arms. Between 5 and 6 P. M. the cry that the Europeans were coming to take possession of the magazines of the Native Infantry spread through the sudder bazar and the lines of the 20th Native Infantry. The men of the 20th at once took to their arms and the mutiny commenced. Colonel Finnis of the 11th, who had approached to pacify them, was cut down; the next victims were Captain Macdonald of the 20th, who tried to control them, and Mr Tregear of the Educational Department, who had unfortunately gone to the lines. The remaining officers of both regiments were shot at and driven from their parade-grounds, or were urged by their men to leave. The bad characters of the city and bazar were assembled before a shot had been fired, and armed with clubs, spears and swords and any other weapon that they could lay hands upon, collected in crowds in every lane and alley and at every outlet of the bazars, whilst the residents of the wretched hamlets which had been allowed to spring up all around the bazar and between it and the city were to be seen similarly armed pouring out to share in the plunder which they knew would soon commence.

First days of the mutiny.

All Christians and the European soldiers then in the bazar were at once savagly attacked by crowds headed, in many instances, by the police and cantonment peons in uniform. The officers who first hurried to report what was going on passed with difficulty through the crowds, and those who came later were attacked and m urdered.

Meantime a large party of the 3rd Cavalry rushed to the jail and released their comrades without the slightest opposition from the jail guard or the guard of the 20th N. I. None of the other convicts were released by the troopers, nor were the persons or property of the European jailor and his family molested. The prisoners, to the number of 839, were let out by a mob of villagers, who, emboldened by impunity, attacked, broke upon and set fire to the jail about midnight. The inmates of the old jail (720) were released about an hour after the outbreak by a small band of sepoys, who were thus permitted unmolested to let loose upon the station a number of the worst and vilest characters to commit havoc and destruction, and who, in all probability, were the chief perpetrators of the atrocities committed on helpless women and innocent children, for the bodies found in the neighbourhood of the old jail were the most mutilated, and by sword cuts, whereas those by the parade-grounds were evidently shot and lay as they fell. In tracing the route taken by one unfortunate lady who, with her children, fled in disguise towards the city, Major Williams felt convinced that, as she emerged from the narrow lanes of the Husaini bazar on to the highroad, she must have fallen in with a band of these wretches and by them have been murdered. Then came the cries of "Ali, Ali," "Dín, dín, Ya Illah," from small bands of Musalmán troopers and sepoys, who rushed through the city arousing the butchers and others to a religious war. The Judge's court and the tahsíldár's office were at once burned down. Mixed crowds of soldiers, sepoys, policemen, hangers-on about the bazars, servants and convicts burned and plundered the cantonments, murdering every Christian that they could lay hands on. Owing to the distance of the civil station from cantonments nothing was known concerning the outbreak until close upon 7 P. M., when the people going to church saw the blaze of burning bungalows to the west. The guards of the different mutinous regiments posted in the civil lines seemed to have as little knowledge of the impending catastrophe, for it was not until they saw the destruction of the residences of their officers and heard the shots fired from cantonments that they marched off to join their regiments. The guards at the treasury and the offices of the Paymaster and Cantonment Magistrate remained steady until relieved, and even a troop of the 3rd Cavalry, under Captains Craigie and Melville Clarke, assisted in restoring a semblance of order and in escorting Europeans to the dragoon lines. Nothing was done by the military authorities to stem the onward march of the plunderers, and the isolated efforts of a few officers who were left unsupported were of little avail against the myriads of ruffians, whose thirst for rapine and blood made them such formidable antagonists. This irresolution nearly cost us our Indian Empire, and is one of the saddest memories of the great struggle. There cannot be any doubt that had one tittle of the energy that was displayed elsewhere been shown in Meerut on the evening of the 10th of May,

the mutiny could never have occurred, or, at least, would have been indefinitely delayed.

The mutineers made no stay in the station, but fled in various directions. Some after holding a short and hurried consultation turned towards Dehli, and others in the opposite direction, but all as disorganized mobs with no acknowledged leader. Some of them threw away their arms and property as they fled, fearing the pursuit that was never attempted, and others abandoned their horses, which were caught towards Galáothi on the Bulandshahr road and were brought in. Many small bodies took to indiscriminate plunder as they went along, and were joined by the ruffians of the bazars and city and the numerous camp-followers, and forming themselves into gangs, robbed travellers on the high road of all that they possessed. The remainder spread fire and destruction nearly up to the treasury, where they were stopped by the guard of the 60th Rifles. About 10 P. M. the Gújars of the neighbouring villages crowded in thousands to attack those parts of the station which had hitherto been spared. They set fire to the lines of the Sappers and Miners; a fine barrack for Europeans and the native huts were destroyed, and the sergeants' bungalow. The only occupants of the bungalow were a conductor and his family. The father and some of the children were cut to pieces, and the mother and the remainder of the children, dreadfully wounded, escaped to the artillery hospital, where one of the children soon after died. Mr. Parker of the canal office defended his house until relieved by the Rifles. Other houses were saved by the servants and the police cavalry. The Gújars attempted to burn the artillery lines, but were driven off by the pickets. The new jail and all the private houses were completely gutted of their contents, and whatever could not be carried away was smashed into fragments. The house of the Commissioner was attacked, and Sayyid Mír Khán Paghmáni, who joined the Commissioner, had his horse shot under him and was wounded in the thigh whilst trying to restrain the mob. The Commissioner, with his wife and another lady, retired to the roof of the house, and the servants said that they had gone to church. "Though drawn swords were put to his throat, the jamadár, Guláb Khán, persisted in this statement, and the other servants were faithfully silent regarding their master's presence. The house was fired: the flames spread, and longer continuance on the roof became impossible; suffocated with smoke, with feet scorched by the heat of the roof, the party was about to descend, when, for a short time, the whole body of murderers went to hunt for Europeans in other places. The servants seized the moment to plant a ladder against the roof at the back of the house, got the party down, took them to the garden, and then concealed and guarded them all night." Two sepoys of the 11th N. I. carefully escorted some ladies to the dragoon lines, a city Musalmán saved two Christian families. A female servant and a washerman were trying to save

The Gújars.

a lady and her children disguised in native clothes, when a ruffian drew aside the veil, and seeing the pale face, cut the poor mother to pieces. If the fact be realised that on many minds the fearful conclusion pressed that if less than 2,500 native troops dared such an outbreak in the face of an equal number of European soldiers, a fearful trial awaited every Christian in the length and breadth of Hindustán. Some idea will be formed of the horror felt by every one on the night of Sunday the 10th May, 1857, a day ever to be remembered in the annals of India. A telegram was sent to Agra, but the wires were cut before the message was completed, and expresses were then sent to Muzaffarnagar, Dehli, and Bulandshahr.

The 11th of May.

At daybreak on the morning of the 11th a force was sent out to reconnoitre. Mr. Williams writes:—"It is a marvellous thing that with the dreadful proofs of the night's work in every direction, though groups of savages were actually seen gloating over the awful mangled and mutilated remains of their victims, that column did not take immediate vengeance on the sudder bazar and its environs, crowded as the whole place was with wretches, hardly concealing their fiendish satisfaction, and where there were probably few houses from which plundered property might not have been recovered. But the men were restrained, the bodies were collected and placed in the theatre, in which a dramatic tragedy would have been that night enacted but for the real and awful one which occurred the night before. The corpses were found grossly mutilated and in a state which showed that they had been exposed to the most wanton insults. Such matters could not be made the subject of judicial enquiry and proved by depositions on oath without reference to names, and putting on record individual instances which in mercy to the feelings of relatives should be buried in oblivion. But the fact that the most atrocious indignities had been inflicted after death is as fully proved as anything in this world can be by credible European eye-witnesses, whose accounts have been elicited and confirmed by repeated enquiries through different channels. Generally the ruffians seem to have been too intent upon the destruction of Christians, too eager to kill, to think of any other atrocities till life was extinct, but in one case there is no doubt of the infliction and repetition of the deepest dishonour, and acknowledgment was publicly made that this was attempted in another case on a Christian female, though these were exceptional cases."

The district.

The European guards were removed within their lines on the 11th and a line of sentries was posted around the European cantonments. Those whose homes had been destroyed were accommodated in the Dumduma, or artillery school of instruction, and the treasure was also removed there. In the meantime the Gújars and bad characters commenced the same system of plunder throughout the district that had

been so successfully inaugurated in the city. Ramdayál, a prisoner confined in the civil jail for debt, was released on the night of the 10th, and hastening to his village of Bhojpur, in the Murádnagar tahsíl, collected a party and murdered the money-lender who had the decree against him. On the 11th and 12th the tahsíli of Sardhana was attacked by Rángars and Rajpúts, who were beaten off from the tahsíli, but they succeeded in plundering the bazar. Kalandar Khán, a havildár of Nirpura in parganah Barnáwa, set himself up as Raja of those parts. A party of fugitives from Dehli came in on the 12th with the news of the mutiny there, but out of a second party which included Lieutenant Willoughby, by whose orders the Dehli magazine was blown up, only one (Captain Osborn, 54th N.I.,) escaped; all the rest were murdered by the villagers of Kumhera on the Hindan river, in the Murádnagar tahsíl. On the 13th the officers of the Hápur stud depôt came in, and on the 14th martial law was proclaimed by General Hewitt commanding the station, and Mr Greathed, the Commissioner, and some show of energy was made in the capture and execution of the murderer of the wife of Captain Chambers, 11th N. I. The news of the mutiny and massacre at Dehli greatly contributed to still further depress the inhabitants of Meerut, and the rumour of an impending attack by the reinforced mutineers increased the general despondence, and seems to have completely paralysed the authorities and prevented any attempt at making use of the considerable force still at their command.

Local efforts.

On the 15th a telegram was received appointing Mr. Fleetwood Williams Commissioner of Dehli, and directing him to proceed with a strong escort to Dehli. He applied for aid to the military, but was refused any assistance. The same day six companies of the Sappers and Miners arrived from Rúrki, and on the next day a portion of them broke into mutiny, and shooting their officer, Major Fraser, fled into the country. Troops were sent after the mutineers and succeeded in cutting up some forty or fifty of them amongst the sandhills beyond the cantonments. On the 19th May Mr. Williams was directed to proceed to Bareilly, but was prevented by the news of an outbreak at Moradabad itself and the refusal of the authorities at Meerut to grant an escort. On the 21st May the ladies came in from Bulandshahr, and the Gurkhas of Dehra passing down the canal punished some of the plunderers in the interior of the district. After a fortnight of inaction, a small party of the carabineers was allowed to make an expedition against the village of Ikhtiyárpur, which had become notorious for the plunder of travellers and for other acts of rebellion. Mr. Johnston, the Magistrate, died from the effects of a fall from his horse and was succeeded by Mr. Turnbull on the 26th May. On the following day, the Dehli force under Brigadier Wilson marched out of Meerut and fought the actions on the Hindan on the 30th and 31st May, in which the rebels were completely defeated. In the meantime Sáh Mal, a Mawai Jat of Bijraul in parganah Baraut, commenced his

career by seizing five hundred head of laden cattle travelling with merchandise, and proceeded to collect escaped convicts and the worst of his own brotherhood to form a gang for more daring exploits. The Gújars also were getting bolder daily. About 125 men of the 11th N. I. who remained faithful were employed on police and patrol duty in the interior of the district and did excellent service whilst the disturbances lasted, but many of the new levies deserted or fled at the slightest opposition. On the 3rd June intelligence of the outbreak at Bareilly arrived, and the Moradabad fugitives, comprising Messrs. Wilson, Saunders, J. S. Campbell, Dr. Cannon, and their wives, reached the boat bridge at Garhmuktesar, but owing to the covert disloyalty of their escort and the opposition of the people of the town, they were not able to destroy the bridge, and could only give orders that all the boats should be drawn up on high land. The same day the villages of Gagaul, Sisari and Murádnagar to the south of Meerut were burned for stopping the communications along the Agra road, but owing tothe treachery of Bishan Singh, kotwál, a native of Rewari, the inhabitants escaped.

Passage of the Bareilly bridge.

On the 12th of June, Mr. Dunlop, the Magistrate, who had been away on leave to the snows, returned and resumed charge of the district. On the 18th a small party of rifles, cavalry and artillery who had been obliged to fall back upon Bábugarh from Bulandshahr again advanced on Galáothi and defeated the force of Walidád Khán of Málágarh. Mr. Wilson also visited Garhmuktesar and found that the orders of Mr. Willlams regarding the bridge-of-boats had been obeyed. In the meantime the rebel troops from Bareilly were approaching the Ganges on their way to Dehli, and not finding boats at Garhmuktesar were obliged to collect them from the other ghâts and private ferries where they had been concealed by those interested in keeping up the disturbances. The brigade consisted of a light field battery, a regiment of cavalry and four regiments of infantry, besides a large following of all sorts, and commenced slowly to effect a passage. Opinions at Meerut as to the proper course to be pursued in dealing with this bridge were divided. One party was for opposing the passage at Garhmuktesar, which might unquestionably have been successfully done by a force which could have well been spared from the station. But this would only have caused a delay of a few days, for the brigade could have moved down and crossed below, where no force from Meerut could have dared to go and meet them. Another was for allowing the mutineers to cross and attacking them midway between the Ganges and Dehli. For this the force at Meerut was not sufficient. Not more than five hundred really effective European soldiers could be detached from Meerut, but it was hoped that advantage might be taken of the straggling line of march of the mutineers, encumbered as they were with about seven hundred carts laden with plunder and women, by a flank attack. Timely

and earnest requisitions were made to the head-quarters camp before Delhi to reinforce the Europeans of Meerut with a detachment of five hundred men from the force encamped at Rái opposite Bágpat, who could easily have reached Meerut in two marches. The position before Dehli, which was never forced even when the number of rebels in Dehli had been trebled, had been seized. Mutineers discouraged by defeat had been driven into the city, and the head-quarters camp was quite strong enough to hold its own for a few days, even without the reinforcement referred to, as the actions on the Hindan and at Badli-ke-Sarái had fully proved. The requisition, however, was negatived, and peremptory orders were sent to the officer commanding at Meerut prohibiting any offensive measures, and directing him to confine himself entirely to the defensive. The effect of this order on Meerut and the surrounding districts was disastrous. The Bareilly brigade passed through the district, burning and plundering all Government property. The stud buildings at Bábugarh were destroyed. Open rebellion showed itself on all sides. Walidád of Málágarh became master of the Bulandshahr district, Aligarh was evacuated, and Kadam Singh set up for himself as Raja of Parichhatgarh and Mawána, and unearthing five guns which had been buried since the conquest in 1803, called his Gújar clansmen to arms. This hesitating policy encouraged the turbulent and confirmed the wavering to the side of disorder, so that at no time since the outbreak had the district officers so many difficulties to contend with.

Formation of the Kháki Risálah.

The villagers on all sides up to within a few miles of cantonments had become so bold that the necessity for some active measures for their coercion and the restoration of some semblance of authority and order became palpable to all. Major Williams and Mr. Dunlop resolved to collect together a volunteer force, subsequently known from their earth-coloured uniforms as the Kháki Risálah, and for this purpose called upon all unemployed Europeans for their services, and the call was nobly responded to. In a short time the force comprised forty-five mounted Europeans and eleven faithful troopers, thirty-eight footmen with two 3-pounder mountain train guns and a 12-pounder howitzer worked by two sergeants and some native artillerymen. The first expedition of this corps (4th of July) was in company with a small force of regulars against a number of Gújar villages about six miles from Meerut, of which the chief were Panchli Ghát and Nagla. The inhabitants of these villages, besides bearing a conspicuous part in the sack of the station and the murder of the Europeans on the night of the 10th of May, had since made themselves notorious by the number and heinousness of their crimes. The principal villages were successfully surrounded, a little after daybreak, by different parties told off for the purpose. A considerable number of the men were killed in the attack, and of forty-six prisoners taken, forty were subsequently brought to trial and suffered the extreme penalty of the

law for their misdeeds. The villages were burned. It was time that something were done to restore order, for not more than a few thousand rupees of revenue had hitherto been collected, though the instalments had long been overdue. There were only Rs. 70,000 in the treasury, which would have been expended in a few days, and except with a strong force not a Government officer could move five miles from Meerut. On the 6th July intelligence was received of the defeat of the rebel force under Walidad Khán by the Játs of the village of Barthona, who took three of his guns and wounded and killed several of his men. These gallant Játs stood out for themselves and for Government throughout the rebellion, and thenceforth particular care was taken to support them and render them assistance when seriously threatened One effect of these proceedings was that Kadam Singh, the *pseudo*-Raja of Parichhatgarh, retreated to the Gújar stronghold of Bahsúma, and his men dispersed, and petitions kept pouring in from different quarters in which the writers tried to prove their loyalty, or to excuse themselves from showing any active support of the ruling power. Sáh Mal of Bijraul now attacked and plundered Bágpat and destroyed the bridge-of-boats, the only remaining means of communication with the head-quarters camp before Dehli.

Further operations in the district.

Brigadier Jones of the Carabineers superseded General Hewitt in command of the station, but the order against employing the troops in offensive operations remained in force. The civil authorities again despatched the volunteers to relieve Begamabad, which was reported to be threatened by the Gújars of Síkri. Before the relief arrived Begamabad had been plundered, but the volunteers determined to attack the rebels in their homes. Síkri was surrounded, and in the outskirts upwards of thirty men were killed, whilst the remainder fled to a large native house with a walled enclosure and offered a determined resistance. The house was gallantly stormed and captured by the dismounted cavalry; and after a severe hand-to-hand encounter within the enclosure, the rebels were disposed of and the village was burned. Still affairs to the west remained in a very unsettled condition: many of the inhabitants of the south-western and western parganahs transferred their allegiance to the king of Dehli, and in Dhaulána they expelled the police and destroyed the Government offices. Supplies were constantly collected and sent to the rebel camp from Baraut, and though earnest representations were made as to the necessity of keeping up and commanding the communications with Dehli through Bágpat, nothing was done. One petition was, however, favourably received, and that was that the General might use his discretion in detaching portions of the troops for service in the interior. The first use made of this permission was to send forty men of the Rifles with the volunteers to beat up the quarters of Sáh Mal. On the 16th of July the force arrived at the Hindan and heard that the Ját was about to attack the loyal

village of Deola, which had assisted the fugitives from Dehli. The ford over the Hindan was barely practicable, and after having it marked the force crossed and pushed on to Deola, where they arrived early on the morning of the 17th, to find that the enemy had fled during the night, leaving their cooking utensils behind them in their haste. The people of Basodh were punished for their complicity with Sáh Mal, and immense quantities of grain that had been stored for conveyance to the rebel camp at Dehli were destroyed. As the force were leaving the village, Dr. Cannon, with one native horseman, was attacked by a large party of rebels, but they dearly paid for their rashness, for the cavalry portion of the force came upon them while held in check by these two gallant men and soon put them all to flight with great loss.

The attacking force, Europeans and natives, only numbered 149 men, and not satisfied with the success that they had met with resolved to pursue Sáh Mal and his army. Mr. Williams writes:—"On the 18th of July, at daybreak, the force marched along the left bank of the Eastern Jumna Canal for the town of Baraut, a distance of about fourteen miles. The Magistrate and Collector, Mr. Dunlop, with rather rash zeal, diverged from the line to visit villages with the view of collecting revenue, but soon found a host coming against him, and had to fight for his life like a man and rejoin the force. The whole country was rising; native drums, the signal to the villagers to assemble, were being beaten in all directions, and crowds were seen moving up to the gathering place ahead. On reaching Baraut the advance guard was attacked; the mounted volunteers drove back the insurgents, killing upwards of thirty of them in the skirmish. An advance was then made on the force by a large body commanded by Sáh Mal himself, who took up a position in an extensive orchard of large trees with a tank in front. The Rifles advancing beautifully drove them out of that, killing many, into the fields of Indian-corn behind, and the mounted volunteers on each flank swept round the orchard, and on the enemy breaking into the fields charged them. Those on one flank coming on a party of mounted men went at them, and after a hand-to-hand fight, in which many of the rebels were killed, it was found that Sáh Mal himself was one of the slain, having been killed by Mr. A. Tonnochy, aided by two of the native troopers. The little force had hardly collected together again when a third attack from a fresh quarter was made by the rebels, but feebly sustained. The news of the death of Sáh Mal having spread, a few rounds from the mountain train guns, and another advance of the Rifles and mounted volunteers, sufficed to disperse this body; and this gallant little band remained masters of the fields, having beaten off at least 3,500 men with considerable slaughter of the rebels, the loss on our side being only one killed and a few wounded; among the latter was Mr. Tonnochy, who had a narrow escape, having a spear thrust at him while engaged with Sáh Mal.

Defeat and death of Sáh Mal.

One of the volunteers, Mr. Lyall, C.S., had a valuable horse killed under him in a personal combat with one of the insurgents. Though Sergeants Anderson and Readie did all good soldiers could do, the mountain train guns, save in the third attack, were of no use. Dr. Cannon had actually to seize and press some of the enemy to carry the ammunition. The success, indeed the safety of the whole party, must be ascribed to the men of that noble corps, H. M's. 60th Rifles, under Lieutenant Mortimer, particularly, and to the mounted volunteers. Some of the Najíbs, *i.e.*, the Magistrate's trained guard, behaved very well; the rest of the infantry were hardly equal to guarding the baggage. But the simple fact that 149 men entirely defeated at least 3,500, after fighting for more than three hours, speaks for itself; all must have behaved nobly. The force encamped that night on the right bank of the canal at Baraut; and the head of Sáh Mal was exhibited, so that none might doubt his death."

"Next day intelligence of an intended attack by a more formidable body of insurgents was received, and a requisition was sent to Meerut for support. On the arrival of the reinforcement both detachments marched to Sardhana on the 20th and halted there. On the following day the village of Garhi, which had been concerned in the attack on the Sardhana tahsíli and the plunder of the bazar on the 11th of May, was visited and the inhabitants were punished, and the force returned to Meerut on the 23rd of May. The effects of this wholesome activity were soon visible all over the district in the collection of the revenue. In this work Mr. J. Cracroft Wilson, the Judge of Morabad, gave most valuable assistance with about 25 of the men of the 8th Irregular Cavalry, who had come over with the civil officers from Moradabad and remained staunch. This most energetic officer, without another European, with only natives whom few would have trusted, went out day after day, having two sets of horses that the animals might get rest, in every direction, collecting revenue, suppressing anarchy, and (having been made a Special Commissioner with powers for the purpose) punishing rebels and plunderers. Over a flooded country, under a burning sun or through rain, Mr. Wilson would make his nearly daily march of about 30 miles, including going and returning, besides occasional chivies after conscience-struck scoundrels, who fled on seeing him. On one occasion, between early morning and dark, he with his men made a march of 26 miles out and back, in all 52 miles, having sent on a change of horses, with merely the grooms, to a notorious village, two of the headmen and two inhabitants of which he had been obliged to hang for a most atrocious case of highway robbery and murder, among other heinous crimes, a place where in June it would have been rash to have sent the horses with their riders. But in the neighbourhood of Dehli and towards Málágarh rebellion was spreading, being encouraged by constant detachments of mutineers from those places."

Results of these expeditions.

Action near Galáothi.

On the 27th July intelligence was received of an intended attack by Walidád on the Ját village of Barthona, and it was determined, at all hazards, to support the Játs and drive the rebels back. A small force was despatched to Hápur, and on the 28th it was ascertained that Walidád Khán had posted 400 cavalry and 600 infantry, with about 1,000 insurgent Gújars and Rajpúts, at Galáothi on the Agra road. An immediate attack on his position was decided on; a small detachment was left to guard the baggage, and the remainder marched for Galáothi at 2 A. M. on the 29th July. On the way information was received that a picket of the rebels was posted at a bridge about four miles on the Hápur side of Galáothi, and a surprise was arranged for and admirably carried out by Capain Wardlaw and a party of the carabineers. The rebel picket consisted of sixty cavalry, and of these forty were killed in the attack. The whole force then advanced on the village, the rifles cleared the enemy out of the high crops on each side of the road in which they had concealed themselves, and the cavalry and guns marched along the road. About one mile from the village a body of the enemy's horse appeared on the road, but a few rounds from the guns sent them flying, and on arriving, the village was found to have been evacuated. The cavalry was sent in pursuit, but with directions not to approach Málágarh; these instructions were issued in obedience to the orders of the military authorities then at Lahore. The restrictions perpetually imposed on the local authorities were much to be regretted, as owing to the defeat of his men Walidád was then left almost alone, and an attack on the fort would most probably have had a successful issue. Two singular guns made of the iron screw sockets of the telegraph posts and mounted on rude carriages were captured at Galáothi. The ammunition consisted of pieces of telegraph wire put up in bags with the powder, and a supply of powder in barrels and coils of telegraph wire as reserves were also discovered.

On the 30th of July a party of rebels from Ghaziabad attacked and occupied the Murádnagar tahsíli and carried off the officials as prisoners to Dehli, so that it became necessary to remove the head-quarters to Mahiuddínpur, about eight miles from Meerut. Officials appointed by the rebels spread over the Murádnagar, Dásna and Dhaulána country, but still the tahsíldár contrived to get in some of the revenue. In the Hápur tahsíl, the neighbourhood of Walidád Khán's force at Málágarh severely checked the restoration of order, and on one occasion it was only with the assistance of the generally disloyal Gújars that the tahsíldár was able to bring in his collections in safety from Datiyána. The Murádnagar rebels pushed up as far as Dhaulari and carried away prisoners the entire police force stationed there. About this time Sajja Mal, the grandson of Sáh Mal, returned from Dehli and again commenced to raise a disturbance in Baraut. On the 23rd of July a party sent to bring in the revenue was attacked: some

Western parganahs still in the hands of the rebels.

were killed and wounded, whilst in one case the villagers said their revenue was ready, but Government should come and take it if they wanted it. Again the Kháki Risálah were obliged to take the field against the villagers of Panchli Buzurg, Nagla and Bhupra, who met with a well-deserved punishment.

By the middle of August the whole of the district except Baraut on the west, Murádnagar on the south-west, and the Hápur boundary on the south, was again, for a short time, well under control; but Walidád, having been strengthened by the Jhánsi Brigade, attempted, with their aid, to raise a levy *en masse*, and gave out his intention of attacking both Hápur and Meerut itself. This was a serious state of affairs, and to add to the difficulty the muharram was then going on, and a requisition came from Dehli for two hundred more men of the 60th Rifles and all the artillery recruits and officers. This last demand reduced the available force in Meerut to one-sixth of the force, which in May, when there really were no enemies who might not have been suppressed by a little energy, was considered barely sufficient to defend the station. "No objection could, of course, have been made to increasing at any sacrifice the army at Dehli for the assault, but it was known that the assault would not take place for, at least, a fortnight, and the detachment from Meerut, which could reach Dehli in three days by Bágpat, was ordered first to march by Saháranpur and Karnál. Notwithstanding earnest remonstrances and solicitations that instead of these valuable soldiers being exposed to a long tedious march up the country, and down again when they were not wanted, they might be kept to drive back the enemies that were threatening Meerut, and notwithstanding the fullest assurances that they should be sent by the direct road and be at Dehli before they could possibly reach by the long route selected, they were taken away. Under these circumstances, after due consideration, it was happily decided that the only way to meet the crisis was to face it manfully by taking the offensive instead of waiting to be surrounded. It was assumed, and as events proved perfectly justly, that nothing was so likely to deter the seditious from any attempt as the movement of a compact little column, and that the appearance of one at Hápur would check Walidád's advance, and thereby all the probable consequences of it." Accordingly a force of 300 Europeans were despatched towards Hápur on the morning of the 27th August, the last and greatest day of the muharram. The first halting-place was selected with a view of allowing the troops to remain near enough to Meerut to hear any firing, should any disturbances occur there, and at the same time to frighten Walidád by the advance of our troops. In the spirit of the instructions already issued, the column had orders not to go near Málágarh, nor to advance beyond Hápur, unless attacked or pursuing. It therefore took up a position near Hápur, and Mr. Wilson took advantage of the

Walidád threatens Meerut.

presence of the troops to collect the revenue. The landholders of Pilkhuwa sent in to say their revenue was ready, and that they were ready to bring it in, but begged that two messengers should be sent to acompany them. Two men were sent, but as soon as they entered the village they were murdered by these very people of Pilkhuwa. A portion of the column visited this village with exemplary punishment.

On the afternoon of the 10th of September intelligence was received at Hápur that the Málágarh rebels were advancing. Major Sawyer took a portion of the mounted force with two horse artillery guns to reconnoitre, and drove in an outlying picket of the enemy on the road towards Galáothi; following up at a gallop they arrived to within 250 yards of the main body of the rebels, who opened on them a smart fire, which continued for some twenty minutes. Fortunately the dashing approach of the reconnoitring party disturbed the range of the enemy, and their four 9-pounder guns were soon silenced by the two 6-pounder guns of the horse artillery. Though the carabineers were drawn up on one side of the road, with the volunteers on the other, and the guns on the portion of the road in the middle, and shot and shell fell thickly round the small party, the only damage received by them was a spoke of the wheel of one of the limbers smashed. "The last few rounds were fired after dusk, and as the main body of the enemy was above 1,000 strong, it was not considered prudent to advance upon them with only 100 cavalry and two guns, and the reconnoitring party returned to camp. It was subsequently ascertained that the rebels really had fled bodily, leaving all their guns, one with the carriage smashed to pieces, on the road the whole night; and that had cavalry pushed on, or had the whole column advanced from Hápur, so as to reach Galáothi before daybreak, the next day the four guns would have been taken. But not even previous successes would have warranted the advance of the reconnoitring party in the dark, into what looked so very like a trap, and it was considered too much for the men and horses to take them out again nine miles in the middle of the night, after they had just retuned from their reconnoitre of nearly 18 miles. The news of the flight of the rebels was not received till too late, and so the gallant little party had not the satisfaction of bringing away the guns they so boldly silenced. Barthona, the village of our Ját allies, was attacked by the Málágarh rebels, the Jhánsi Brigade, and the guns of which they resumed possession when they recovered from their panic, and notwithstanding that the Játs could not use their guns, being attacked at points on which the guns, by some arrangement immoveable, did not bear, they beat off their assailants most gallantly, with a loss to themselves of only twenty-five killed and wounded. The news of the attack did not reach the Hápur force in time for them to assist the Játs. The Hápur column had no further opportunity of distinguishing itself.

Second action near Galáothi.

but remained out, fully accomplishing the object for which it was detached, till hastily summoned to Thána Bhawan, in the Muzaffarnagar district.

Attack on Murádnagar.

"On the 17th September an attempt was made to surprise the rebel tahsíldár of Murádnagar, and a small force (243 cavalry and 80 foot police) of native cavalry and infantry, under Major Stokes and Captain Craigie, marched during the night and arrived at the town about 6 A. M. The position of the rebels was a strong one. Murádnagar has a brick wall on three sides and is surrounded with mango orchards, and at the time was almost concealed by high crops. The column was fired at, on approaching the wall, and a body of about two hundred horse came out on one side. A part of the cavalry was sent after them. The enemy attempted a charge, but their hearts failed them, and they turned and fled, pursued by the Multán cavalry led by Lieutenant Armstrong of the 59th N. I., so closely, that they had not time to shut the gate, and Lieutenant Armstrong and his men drove them before them, cutting up a number, through the village into the high cultivation on the other side, in which, after many had been killed, the rest got off. Subsequently, while Lieutenant Armstrong was engaged in clearing the village, he was suddenly attacked by a rebel trooper of the 9th Irregular Cavalry, who rushed at him, and having him at a disadvantage cut him down. An Afghán with Lieutenant Armstrong dismounted and killed the rebel and thus saved his officer's life. In the meantime Captain Craigie tried with his party to intercept another body of rebels. His men, newly raised since the mutiny, wanted confidence, and he himself with his native adjutant and one or two men outstripping the not over-zealous main body, got engaged with the enemy. The native adjutant, formerly a havildár in the 11th N. I., who had remained firm to his duty, not being a good horseman, was mortally wounded before Captain Craigie could save him, but the rebels found this well-trained cavalry officer and the few men near him more than they liked, and when the rest of the troops approached, fled. Though the rebel tahsíldár escaped, the result of this expedition was most satisfactory: the rebels were driven completely out of the parganah and across the Hindan river, and from a large tract the collection of the revenue commenced. The road from Meerut to Dehli was opened; 57 of the enemy, among them many of the 9th Irregular Cavalrymen, were killed and 17 prisoners were taken. The loss on our side was one of Captain Craigie's men killed and one severely wounded; one risáldár and two dafadárs andt hree sawárs of the Multán horse slightly wounded. This little affair at Murádnagar was the last there is to relate. With the fall of Dehli, which occurred immediately afterwards, all hopes of the rebels and the rebels themselves disappeared and all fighting ceased. The Magistrate, with a party of mounted and foot police, made a tour of the district, seizing and summarily disposing of rebels. On the evacuation of Málágarh after the fight at Bulandshahr, mail-carts and dák carriages began to run, traffic recommenced, and soon the only

signs of the deadly strife were the blackened ruins of public and private buildings, the sad row of tombstones recording the dreadful deaths of those who were massacred, and the little entrenchment where, with numbers decreasing as the danger increased, a little band of Europeans amidst thousands and thousands of rebels, and within reach of Dehli, maintained the name of their country and the authority of Government. The Rohilkhand rebels kept a large force with artillery on the east of the Ganges, opposite the north-east part of the district; but the presence of a small party of mounted and foot police, and when they threatened invasion, two horse artillery guns and a small body of troops sent on requisition by the military authorities, checked them effectually, and though mustering about 6,000, with eight guns, they were never able to enter the district."

Major Williams' inquiry.

At the close of 1857, Major Williams, in his capacity of Commissioner of Military Police, investigated the conduct of the police in Meerut during the outbreak, and as the results of the evidence then collected go far to bear out the opinions of Mr. Fleetwood Williams they deserve some notice here. The evidence showed that the police had grossly neglected their primary duties of protecting property and quelling disturbances. In many cases Europeans were murdered in the sudder bazar and close to police-stations, and in some instances policemen in uniform headed the gangs of murderers. All were not, however, equally guilty: in the beginning some attempts were made to quell the outbreak and plundered property was recovered from the rioters, but these efforts were nipped in the bud by the head police officer, "who being himself a Gújar, and moreover fearing the vengeance of the mob, would allow no further seizures to be made either of persons or property." Whatever the worth of the evidence may be, a careful examination of the depositions recorded by Major Williams shows (deposition 1) the existence of an ill-feeling on the part of the Muhammadans against the Christians, due to an impression that their religion was powerfully shaken, and in connection with it the cartridge question was discussed. It would also appear that on the committal of the troopers of the 3rd Cavalry to prison for refusing to use the cartridges rumours were rife that the sepoys were dissatisfied and would probably mutiny (depositions 4, 5). Beyond the fact of the visit of the wandering *fakír* and his previous appearance in Umbála nothing beyond mere suspicion can connect him with any movement towards mutiny. On the day of the revolt a Kashmíri girl, named Sophie, received intimation of the intended mutiny about noon, and this with the warning given to the kotwáli guard about half an hour before the outbreak, are the only signs of premeditation that have been made known. On the other hand, several native officials averred that they saw no signs of any impending revolt, and they believed "that evil reports, in the first instance, caused, and the uncontroverted boast of the

extermination of all Europeans rapidly spread the revolt." From the evidence of certain sepoys and troopers it would appear that no general warning was given to the whole body, nor was any unanimous plan of action concerted amongst them. Although some days before the outbreak two Musalmáns, naiks of the 3rd Cavalry, swore in the men of their regiment to refuse the cartridges, said by a magazine employee to be greased with cow's and pig's fat, until their use was sanctioned by the whole native army; and though the evidence of others shows that some few were prepared to act for the liberation of their comrades, yet that they must have consisted of a portion of the men only, since many of the sepoys undressed and unarmed were, according to their usual wont, lounging about the bazars, totally unprepared to the last moment, and only when the cry was raised that "the Rifles and Artillery are coming" did they fly to their lines. And it would seem that this was done "more from some undefinable dread of something about to happen than to carry out any preconcerted plan of action, for amongst them were some who sided with and defended their officers to the last; that alarming reports, in the first instance, of polluted food to be forced upon all, and subsequently of sets of irons sufficient to confine the whole force being in course of preparation; and finally, on the evening in question, of the start of the rifles and artillery for the purpose of disarming all the native regiments circulated by a cook-boy of the rifles and the bazar people, and confirmed by a sawár coming from the direction of the Brigade-Major's house, were the immediate cause of the mutiny; that a recruit of the 20th Native Infantry, who fired the first shot (and is said to have been killed by his comrades for thus involving them in ruin and disgrace) implicating them in their estimation beyond recall; and the death of Colonel Finnis sealing their doom, nothing but flight and desertion could save their lives; that the detached guards did not break out simultaneously with the regiments, but that some even remained at their post a day or two after, and that the others, hearing rumours of the cause of the firing, hastened to stand by or fall with their brethren in arms; that, moreover, such was their unpreparedness that their wives and families were left behind unheeded and uncared for, who roved about the town for some days seeking food and shelter, and from thence disposed of themselves as best they could."

"Some depositions prove that the sawárs contented themselves with releasing their comrades only; that the rest of the prisoners in that jail were subsequently let loose by a mob of villagers, and those of the old jail by sepoys of the 11th and 20th Native Infantry. Other depositions bear witness to the friendly conduct of some cavalry troopers, who, in one instance, dispersed the mob that attacked Mrs. Courtney's carriage, and in another case warned soldiers walking in the bazar to fly. The mutineers fled as a disorganized mob, in bands varying in numbers, and in

The people generally were unprepared.

different directions, many towards Dehli, but others in totally opposite quarters, and the jail guard, on being met and questioned, stated they had fled in dismay from fear of being involved in the consequences of the revolt. The depositions of all the Europeans prove the total inaction of the police as regards the murdering and plundering by the mobs; and in many instances the actual murder and attempts at murder of Europeans by mobs and policemen; the former being often headed and incited by the latter; and in some few instances of the bad characters being accompanied and assisted by sepoys and sawárs. The depositions of the city and bazar residents, as also those of all the Europeans, testify to the total want of preparation on the part of the inhabitants of both, as evidenced by the shops being open, trade carried on as usual, travellers journeying unarmed to and fro, realizing money, &c., some of whom were plundered and maltreated by the mobs, to whom all concur in chiefly ascribing the plundering, burning, and murdering that occurred. The depositions of the native residents also show that they ascribed the mutiny to the evil rumours that were afloat and the fears cherished in consequence by the sepoys for the safety of their caste and religion; also their conviction that the excesses committed by the mobs resulted from the prevailing belief that the Europeans had been exterminated by the native troops; and the withdrawal, in consequence, of all fear of retribution, as the reaction that took place the next morning clearly proves; for when they found the Europeans were still alive and in force, they rapidly disgorged their ill-gotten plunder, and many fled. Several depositions, also, prove how much loss of life and property might have been avoided, and how much good effected by a little energy and decision, by the presence of even a handful of Europeans patrolling the streets during that ever memorable night. Other depositions prove the mutilation of European corpses, but only of those away from the sepoy lines, and which must have been perpetrated by the mobs; while those apparently killed by the troops were left as they fell." Since the mutiny nothing has occurred to disturb the peace of the district, and all matters of interest naturally fall under the different heads into which the district notice has been divided.

Medical history.

The only endemic disease in the district is malarious fever, which has increased considerably since 1865. On this subject Dr Moir writes as follows:—"It is a well-known fact that defective drainage is an essential element to the production of malaria, and it is believed that a considerable portion of the district has been modified in this respect by the railway which has been opened since 1867, and which runs through fifty miles of this district. Whether there has been or not an increase of fever in all parts of the district remote from the railway I am unable to say, but to show that there has been a marked increase, I subjoin tables showing the ratio of fever

Fever.

cases to all cases treated at the Meerut and Hápur dispensaries for the years 1867 to 1871—

MEERUT.

Year.	Total cases treated.	Fevers.		Diarrhœa.		Dysentery.		Inflammation and hypertrophy of spleen.	
		Total cases.	Ratio per 1,000.	Total cases.	Ratio per 1,000.	Total cases.	Ratio per 1,000.	Total cases.	Ratio per 1,000.
1867, ...	9,518	946	99·39	312	32·77	96	10·08	42	4·41
1868, ...	13,966	1,218	87·21	395	28·28	166	11·88	51	3·65
1869, ...	14,149	1,582	111·81	487	34·41	269	19·01	52	3·67
1870, ...	14,240	2,085	146·41	439	30·82	273	19 17	140	9·83
1871, ...	19,745	3,732	189·01	698	35·35	493	24·96	631	31·95

HÁPUR.

Year.	Total cases treated.	Fevers.		Diarrhœa.		Dysentery.		Inflammation and hypertrophy of spleen.	
		Total cases.	Ratio per 1,000.	Total cases.	Ratio per 1,000.	Total cases.	Ratio per 1,000.	Total cases.	Ratio per 1,000.
1867, ...	3,052	382	125·15	90	29·48	89	29·16	28	9·17
1868, ...	3,327	320	96·18	80	24·04	139	41·78	14	4·20
1869, ...	3,860	421	109·07	115	29·79	107	27·72	7	1·81
1870, ...	4,523	870	192·35	140	30·95	130	28·74	18	3·31
1871, ...	4,068	723	177·94	79	19·44	123	30·27	15	3·69

The above statements show a marked increase of fever and its sequelæ. This district is greatly under the influence of canal irrigation; to the excess of irrigation, to the obstruction of the natural drainage by the canal, and its rajbahas, as well as by the railway, is due, according to most authorities, the malaria which so grievously afflicts the people in the months of August, September, October, and November of each year, during and after the termination of the rains.

Dr. Moir's report.

Since writing the above, I have seen a second memorandum by Dr. Moir on fever in the Meerut district, and glean from it the following particulars:—In this district there are 1,666 villages, and, excluding the 11 town circles, there are 40 rural circles, and thus each rural mortuary circle contains on an average 41 villages, with a mean population of 673 persons to each village.[1] The mode of collecting the mortuary

[1] Sanitary Report for 1874, Appendix I.; see also Gazetteer, II., 128.

statistics of each village is as follows:—The village watchman goes once a week to the registering office of his circle, often nine or ten miles distant, to report the deaths for the week as far as he can remember them. In the sickly season of the year a great number of deaths must thus escape registration, and to add to the uncertainty, the watchman often becomes ill, and there is no one to take his place. The registering offices are also so placed as to meet the police requirements, and are not arranged with any reference to the convenience of mortuary registration; but at the same time it must be noted that this is an error which can easily be rectified by making the police-station the centre of a circle, and not, as it now often is, on the boundaries or in a corner of a circle. Dr. Moir thinks that it is unsafe to draw conclusions from results thus obtained, and that Government must adopt other means in collecting statistics which will enable correct inferences to be drawn as to how far canal irrigation is injurious to the health of the people. He proposes generally the adoption of each village as the unit of registering population, and not the circle, and the collection of data regarding the area in each village watered from the canal, the nature of the soil, subsoil, rise and fall of water-level, the rainfall, drainage and the kind of crops produced. "These observations," he writes, "should be made over an extended area and carried on in the vicinity of canals and also in adjoining localities, but at a distance from canals, and not irrigated from them. The want of a series of observations of this sort, as it seems to me, has led, and will continue to lead, to assertions and counter-assertions as to the influence of the canals, all equally incapable of proof." He finally proposes a special committee, as "the mortuary returns we now possess afford no solution of the vexed question."

He thinks the present statistics are incomplete.

From figures given by Dr. Moir it appears that for the four years 1871-74 the mean fever mortality in the villages watered by the Eastern Jumna canal has been 16·33 per thousand; in the Ganges canal group it was 28·50, and in the Anúpshahr branch group it was 20·11, giving a mean for the entire canal-irrigated villages of 22·8 per thousand. This appears greatly in favour of the western canal as compared with the Ganges canal and its branches, but the registration in Bágpat for 1871, which gave a total death-rate of only 6·5 per thousand, is so manifestly erroneous that the figures for the Eastern Jumna canal must be rejected as entirely untrustworthy. Still it may be gathered that the death-rate is higher along the Ganges canal, but whether this result is only due to better registration, or is really caused by a more extensive water-supply and worse drainage, cannot be positively asserted. Strange to say, however, the recorded death-rate from fever in the circles not irrigated, or but partially irrigated, from canals is very high. The mean for the same years in Daha was 16·22 per thousand; in Kumruddínnagar was 15·97; in Loni, 20·21; in Shahdara, 20·21; in

Deductions from existing statistics.

Ghâziabad, 23·48; in Kharkoda, 31·95; in Hápur, 24·40; and in Mau khás, 23·73 per thousand, giving a mean mortality of 23·73 per thousand. The circles of Daha, Kumruddinnagar and Hápur have no canal irrigation, and Kharkoda apparently none, yet the average death-rate is nearly the same as in the canal-irrigated circles, and the first inference from this result would be that canal-irrigation exercises no prejudicial influence on the public health, so that more minute observations and details regarding the soils and population is necessary before any sound conclusion can be arrived at. Taking the urban population, the mean ratio for the same years of deaths from fever in seven towns removed from canal irrigation was as follows:—Meerut city, 35·47; Meerut cantonments, 28·26; Hápur, 28·09; Garhmuktesar, 17·10; Bágpat, 30·09; Ghâziabad, 29·39; and Pilkhua, 41·79. These averages give a mean of 31·43 per thousand calculated on a total population of 124,866. Three towns near to canal irrigation give an average death-rate as follows:—Sardhana, 23·82; Baraut, 32·84, and Mawâna, 11·61, or a mean of 24·14 on a total population numbering 27,587 souls. These figures, too, would apparently show that towns situated in the midst of canal irrigation are actually more free from fever than those at a distance from its influence. Bágpat, with its excellently drained site on the high bank of the Jumna, has suffered more than lowlying swampy Sardhana, with its imperfect drainage.

Mortality amongst the troops.

The epidemic invaded the district in 1870 from the north-west from Saháranpur and Muzaffaranagar, and a comparison of the statistics for the years 1871 to 1874 of the villages situated along the northern border with those lying along the southern border shows that in the northern circle the epidemic is on the decrease, while in those to the south it is increasing. The careful returns kept up in Meerut cantonments for the troops, the civil hospital, and the jail, all point to an abnormal increase in the fever admissions since 1869. Between 1865 and 1869 there was no increase from fever amongst either the European or the native troops, rather a decrease. Among the civil hospital patients there was a tendency to an increase, more marked, however, in the jail population. "But during the five years 1870-74 there has been a marked increase of sickness among all these bodies. The ratio of fever admissions rose from 371 per 1,000 of strength in the first five years to 838 in the last five. Among European troops and among native soldiers the rise was from 357 to 1,108. In the civil hospital the fever increase was from 93 to 201 per 1,000 of total treated; in the central jail the first five years give a mean ratio of 158 per 1,000 of strength, and in the last quinquennial period it is 750 per 1,000. Thus fever has more than doubled among European soldiers and in the civil hospital, more than trebled among the native soldiers, and more than quadrupled in the central prison. In the European regiments there was a slight increase, during the last five years, of

spleen affections, dysentery, and hepatitis, and a decrease of diarrhœa. The admissions from all causes rose from 1,500 to 1,936 per 1,000, and are accounted for by the fever. The deaths fell from 35 to 30 per 1,000 from all causes in the same period."

General character of the health of Meerut.

After a comparison of admissions from malarious fever and all causes, and the death-rate of particular corps of European troops in Meerut from 1865 to 1874, Dr. Moir writes:—"An examination of these returns leads me to the conclusion that no regiment has deteriorated in health by its residence here, for were it not so it would exhibit a ratio of sickness on its departure greater than the other corps in the garrison. I have confined my remarks to fever alone, as it is the principal cause of the admissions. That there has been a great increase of fever at Meerut of late years among all classes of people is most certain and very remarkable, but how to account for the fact is a very difficult matter. Some attribute it to an increased rainfall, others to defective drainage and canal irrigation, and others again chiefly to a rise in the subsoil water in this station. A comprehensive view of the facts leaves in my mind great doubts as to the special causation of this outbreak of fever. As to drainage, though very defective in the lines of the native regiments and in the bazars and native city, it is so good around the barracks of the European regiments as to require and to be susceptible of little improvement. Meerut has been improved since 1867 by the making of a deep cut north of the station which prevents the Abu Nála from overflowing after heavy rainfalls. This has been effected, and the Abu Nála itself was some years ago slightly improved. The central prison, too, two years ago had a new scheme of drainage carried out, yet, in spite of these partial improvements in drainage, the fever has gone on increasing. The sub-soil water-level has been gradually rising since 1869, if not before. On the 25th September of that year I found the water 14 feet two inches below the surface of the ground, as near as I could judge, taking the ground level without any instrument. On 31st October, 1869, the water was 14 feet below the surface. On the same date in 1870 it was 13 feet 1 inch; in 1871, 12 feet 3 inches; in 1872, 12 feet 1 inch; in 1873, 11 feet 7 inches; and in 1874, 9 feet 5 inches. In connection with this rise of the spring level comes the question whether this fact in itself is sufficient to account in any, or to what, degree for the prevalance of fever."

The connection, however, between the rise in the water-level and sickness, Dr. Moir contends, has not yet been clearly made out, nor would he say that the obstruction of drainage by the rajbahas is anything more than a possible cause of fever. He also refers to the epidemic of malarious fever which occurred in 1817-21, before either of the canals were even surveyed; to a second which occurred ten years later; and to a third in 1843, which has been noticed elsewhere. Some suggest that the disease is an epidemic fever of a typhoid type,

but Dr. Moir states that "among none of the patients belonging to Meerut, nor among the police brought in for treatment from all quarters of this district, during the course of this epidemic, have I found true enteric or typhoid fever in a single instance." I have given the opinions of Dr. Moir at some length, as from his careful study of the question, and his lengthened local experience, they are deserving of every attention. The balance of evidence, I still think, goes to show that the epidemic is aggravated by the presence of excessive moisture in the soil whether due to canal irrigation or defective drainage in places not irrigated by the canal, and that the degree to which over-saturation is a cause of excessive mortality, and the amount of it necessary to produce the disease are alone subjects of discussion. The inquiries of Cutcliffe, Planck, and others, clearly demonstrate the connection between a high spring-level and malarious fever, and leave little to be desired in this direction.

Small-pox, as a rule, only visits the district at intervals. Between 1864 and 1872 there were only two outbreaks, and neither of these was very severe. Cholera was brought down by the pilgrims from Hardwár in 1867, in the middle of April. It was most prevalent during April, May, and June, then abated a good deal till towards the end of August, when it attacked the 3rd Buffs, stationed in Meerut cantonments, in the most virulent form. Almost every case that appeared in this regiment proved fatal. Amongst the native population only 33 per cent. of those treated in hospital died. After October there were few deaths recorded in the district. It is remarkable that the cholera was prevalent amongst the native population from the 15th of April, but it did not appear amongst the Europeans until the 15th August, and then almost confined itself to the one regiment. There were only seven cases amongst the Artillery, whose strength was equal to the Buffs, and whose barracks are only a continuation of the infantry lines, whilst among the XIXth Hussars there were only two deaths. The Buffs lost upwards of 130 men in two months, and the percentage of fatal cases to those treated in hospital of the entire European garrison was 92·81. The following statement gives the causes of death as registered by the mortuary registrars for eight years:—

Cholera.

Year.	Fever.	Small-pox.	Bowel complaint.	Cholera.	Other causes.	Total.	Percentage of deaths to 1,000 of the population.
1867, ...	10,287	914	1,087	4,073	3,392	19,753	16·40
1868, ...	8,425	294	2,064	318	2,653	14,354	11·89
1869, ...	9,626	4,984	908	565	3,133	19,221	16·00
1870, ...	20,263	2,218	...	118	4,315	26,914	22·41
1871, ...	28,623	1,307	2,928	84	1,941	34,883	29·05
1872, ...	38,209	826	2,983	510	2,678	45,206	35·53
1873, ...	26,073	2,508	2,428	53	1,847	32,909	25·80
1874, ...	28,910	1,023	1,990	5	2,249	34,177	26 82

GAZETTEER

OF THE

MEERUT DISTRICT.

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Bahsúma,	355	Hápur tahsíl,	387	Nirpura,	418
Baleni,	355	Hastinápur town,	387	Niwári,	418
Bamnauli,	355	Hastinápur parganah,	388	Nizámpur,	418
Bara Partappur,	356	Inchauli,	390	Paríchhatgarh,	418
Baraut town,	356	Jagauli,	390	Patparganj,	419
Baraut parganah	358	Jalálabad parganah,	390	Phalauda,	420
Barnáwa town,	360	Jalálabad village,	392	Phaphúnda,	421
Barnáwa parganah,	361	Jáni kalán,	392	Pilkhua,	421
Begamabad,	365	Kahwái,	392	Púth parganah,	423
Bijwára,	365	Kaili,	392	Púth village,	425
Binauli,	365	Kankar Khera,	393	Púthi,	426
Chandlawad,	366	Karnáwal,	393	Saláwa,	426
Chhaprauli parganah,	366	Kásimpur,	393	Sarauli,	426
Chhaprauli village,	368	Kharkoda,	393	Saráwa town,	426
Dabathwa,	369	Khekara,	393	Saráwa parganah,	426
Dádri,	369	Kirthal,	394	Sardhana town,	428
Dáha,	369	Kithor town	394	Sardhana parganah,	430
Dásna town,	369	Kithor parganah,	395	Sardhana tahsíl,	436
Dásna parganah,	370	Kumruddínnagar,	397	Sarzapur,	436
Dáteri,	372	Kutána town,	397	Shahdara,	436
Daurála,	372	Kutána parganah,	397	Shahjahánpur,	437
Dhaulári,	372	Láwar,	400	Shamsher,	438
Dhaulána,	372	Loni town,	400	Súrirpur,	488
Dohai,	373			Tíkri,	438

AJRÁRA, a village in parganah Saráwa of the Meerut district, is distant from Meerut 11¼ miles. The population in 1865 was 2,870 ; in 1872 it numbered 3,124 souls. Ajrára was formerly the head of a parganah, and from it the present parganah was known as Saráwa Ajrára. The parganah was absorbed in 1853. The place is said to have been the seat of a Hindu monarchy previous to the irruptions of the Musalmáns. Ajipál, a Jogi, built a Thákurdwára here and called the place Ajipára, now corrupted to Ajrára. The British Government now makes a contribution from the village in aid of the temple. In the time of Muhammad Sháh, Khwája Basant Khán obtained Ajrára with other villages

in *jágír*. He built a fort, which was razed by the Marhattas in 1202 *faslí* (1794 A.D.) on the rebellion of Fateh Ali Khán, brother of Khwája Basant Khán. The possessors now are Taga Musalmáns.

AUPERA, a village in parganah Hápur of the Meerut district, is distant 20 miles from Meerut. The population in 1872 numbered 1,864 souls. There is a police-station here on the Hápur and Garhmuktesar road.

BÁBUGARH, a village in parganah Hápur of the Meerut district, is distant about three or four miles from Hápur. In 1865 the population, including that of the stud lands, was 2,040, and in 1872 was 2,165. The Government stud is here, of which the stables were built in 1823. The place is inhabited by Dhé Játs, Sáises, and Chamárs. The population of the village proper in 1872 was 575.

BÁGPAT or Bághpat, the chief town of the parganah of the same name in the district of Meerut, is situated on the left bank of the Jumna, 30 miles from Meerut. It is said to have been one of the five '*pats*' mentioned in the Mahábhárata. Its original name appears to have been Vyágrha-prastha, or 'place of tigers.' The other '*pats*' were Sonpat, Pánipat, Tilpat, and Indarpat, the settlements of Yudhishthira in the Khándava forest. Another derivation of the name is Vákya-prastha, 'the place of speech.' The name Bágpat was subsequently changed to Bághpat by one of the Dehli emperors. The population in 1847 was 6,494, in 1853 was 7,377, and in 1865 numbered 7,887. In 1872 there were 7,367 inhabitants, of whom 2,180 were Musalmáns (1,052 females) and 5,187 were Hindús (2,320 females), consisting for the most part of Chauhán Rajpúts. The Mahájans (Saraugis) established in the *mandi* built about 110 years ago by Zábita Khán are the most important of the residents. A large fair is held here every year in February. There are two saráis, one poor one on the southern outskirt, and one, unfinished, to the east. The latter was commenced by the late Karam Ali Khán, tahsíldar of Ghaziabad, whose family residence was here. The tahsíli, which was removed here from Baraut after the mutiny, is situated opposite the police-station on the Meerut road. A new dispensary has been built behind the tahsíli. There are a fine Saraugi temple, a good-looking Vaishnava temple, and three mosques in the town. There are also a post-office and a good encamping-ground, with water and supplies in abundance. Houses with ornamental fronts are by no means rare, and altogether the place merits the attention that has recently been given to it. Bágpat was one of the halting-places of the Mughal army in their raid into this district in 1399 A.D.

Bágpat is divided into two portions: the *kasbah* or agricultural portion, and the *mandi* or trading quarter. The former lies close to the Jumna, amongst the ravines on the edge of the cliff, which carry the drainage to the river below. The inhabitants are chiefly

The site.

Chauhán Rajpúts, who cultivate the town lands and graze large herds of cattle here and on the opposite bank. The houses are brick-built; the people, a hardy race, fond of pig-sticking and said to have given assistance to the British troops before Dehli in 1857. The *mandi* lies to the north of the *kasbah* about half a mile from the river, on a well-raised site, which, also, has a good drainage fall towards the river. The remains of a surrounding wall and six gateways are still visible. One wide street runs from north to south, and another from east to west, having an open chauk at their point of intersection; a second chauk exists further to the west, where a second street runs from north to south. The first of these streets forms the principal bazar, and is well lined by good shops, and all the streets are well kept, metalled, and drained, showing an appearance of cleanliness and prosperity not often met with. Outside the town, on the north, the Meerut metalled road passes to the bridge-of-boats, and to the west and south a second large unmetalled road leads to the same point. The water in wells is found at a depth of 35 feet from the surface, and is sweet and good. The general health is good, and canal irrigation does not approach nearer than within three miles. For an old town and an increasing one there are few excavations about, and none containing much stagnant water.

The municipality.

The municipality of Bágpat is managed by a committee of thirteen members, of whom three are official and ten are elected by the tax-payers. The income is derived from an octroi tax, which in 1872-73 fell at Re. 0-15-6 per head of the population. The following statement shows the income and expenditure for three years:—

Receipts.	1871-72.	1872-73.	1874-75.	Expenditure.	1871-72.	1872-73.	1874-76.
Opening balance, ...	1,896	2,218	3,426	Collections, ...	1,064	965	890
Class I. Food and drink,	6,477	5,909	1,709	Head-office, ...	97	158	36
„ II. Animals for slaughter, ...	7	32	273	*a.* Original works,...	...	4,656	880
„ III. Fuel, &c., ...	86	122	165	*b.* Repairs, ...	3,379	274	2,843
„ IV. Building materials, ...	166	253	226	Police, ...	2,311	1,537	1,670
„ V. Drugs and spices, ...	134	194	231	Charitable grants, ...	206	197	491
„ VI. Tobacco, ...	37	35	57	Conservancy, ...	435	504	504
„ VII. Textile fabrics,	325	526	439	Road-watering, ...	13	76	120
„ VIII. Metals, ...	64	101	102	Lighting, ...	...	284	213
				Gardens, ...	600	403	...
Total octroi, ...	7,296	7,172	3,222	Miscellaneous, ...	...	204	234
				Education, ...	...	...	360
Tolls on carriages, ...	207	...	2,404				
Gardens, ...	79	67	...				
Fines, ...	56	51	58				
Pounds, ...	15	66	105				
Extraordinary, ...	325	64	6				
Miscellaneous, ...	511	742	292				
Total, ...	10,385	10,380	9,513	Total, ...	8,105	9,038	7,741

The following statement shows the imports and consumption per head of the population in 1872-73:—

Articles.	Net imports in quantity.	Net imports in value.	Consumption per head.	Articles.	Net imports in quantity.	Net imports in value.	Consumption per head.
	Mds.	Rs.	M. s. c.		Mds.	Rs.	M. s. c.
Wheat, ...	10,298	17,933	1 15 14½	Animals for slaughter. ...	...	1,024	...
Other grains, ...	20,222	45,001	...				
Gúr, ...	34,069	1,01,226	4 24 15	Wood, ...	4,799	1,062	...
Shíra, ...	4,385	8,978	0 23 13	Oil, ...	118	1,421	0 0 10
Shakr, ...	4,802	4,802	0 26 1	Oil-seed. ...	1,389	4,251	0 7 9
Khánd, ...	6,741	5',381	0 36 9	Building materials,	270,752	8,100	...
Pán, ...	50,400	170	...	Gums, ...	60	156	...
Fodder, ...	3,579	5,131	0 19 7	Spices and Kirána,	1,131	3,987	...
Vegetables, ...	4,915	4,857	0 26 11	Tobacco, ...	163	556	...
Ghi, ...	400	8,695	0 2 3¾	Cloth, ...	...	30,058	...
				Metals, ...	780	6,714	...

Similar statistics are obtainable for each year since the municipality was established. Bágpat is the great sugar mart of the district, and the imports given above do not represent the actual import, only that on which duty is paid as for local consumption. The total trade in 1870-71 was estimated at 350,353 maunds of saccharine produce. The principal ganj is one large sugar market, where the *gúr* is collected in large quantities in cakes of about four sers each, and distributed by cart and river to the Panjáb, Rajputána and Bundelkhand. Boats move down the river to Dehli, Agra, and Kálpi, and carts cross to Pánipat, Karnál, Ambála, and Lahor. The communications inland are also good, and the trade is increasing every year. Besides *gúr*, the exports to Agra and Muttra comprise cotton, wheat, red pepper, *saji*, *Multáni matti* (Armenian bole), and *dhák* bark, and in return red stone, mill-stones, *khali* (oil-cake), and fodder are received.

Condition of the parganah.

Bagpat or Bághpat, a parganah in the tahsíl of the same name in the Meerut district, is bounded on the north by Kutána, Baraut, and Barnáwa; on the east by Meerut and Jalálabad; on the south by Loni, and on the west by the Jumna river, which separates it from the Panjáb province. According to the census of 1872 Bágpat had a total area comprising 194 square miles and 55 acres, of which 158 square miles and 334 acres were cultivated. The area assessed to Government revenue amounted to 190 square miles and 557 acres, of which 155 square miles and 375 acres were cultivated. Of the remainder 17 square miles and 520 acres were shown as culturable.

To the north the soils approach in character the rich black loam of Kutána and Baraut, but to the south they gradually lose this distinctive feature and merge into the ordinary soils of

the district. In common with other parganahs the estates lying on the edge of the uplands present a surface broken up by ravines, or too high for the ordinary canal levels, and without capability for well-sinking. They are, however, often compensated by the fertility of the sloping lands leading down to the *khádir* or river-bed lands. Here wells are easily constructed, and from the slope irrigate a larger area, yielding fine crops of sugarcane, cotton, tobacco, and wheat. On these lands the Játs bestow all their energies, leaving the unirrigated high lands for the rain-crop, and in favourable seasons a cold-weather crop also. The Eastern Jumna canal fully waters the entire inland tract right up to the edge of the dividing cliff. Cultivation has increased during the currency of the past settlement from 73,506 acres to 98,369 acres, whilst irrigation has more than quadrupled, rising from 14,167 acres to 59,064 acres. The irrigation from wells (596 masonry and 809 earthen) amounts to 22,938 acres, whilst tanks water 1,288 acres, leaving the large area of 34,838 acres watered by canals.

The Játs, who are masters of the parganahs to the north, here share the soil with other castes. They hold 32 estates with shares in 19 others; Tagas hold 20 with shares in 14 others; Brahmans hold ten estates and shares in 24; Hindu and Musalmán Rajpúts hold eleven estates and own shares in 15 others; Goshains hold two whole estates and shares in a third, and Ahírs hold 18 estates and shares in six others. Mr. Forbes remarks that the cultivating classes are found in the same proportion. Játs cultivate themselves fifteen estates without any assistance from other classes, and in addition cultivate lands as proprietors or tenants with others in 45 estates. The Tagas, on the contrary, only manage three of their estates without assistance, the Rajpúts one, the Ahírs seven, and the Brahmans six. The Goshains have married and settled down and make excellent cultivators. The transfers during the past settlement are very small, amounting only to 9,365 acres out of 123,677 acres by sale and 1,327 acres by mortgage; money-lenders have only obtained a lien on 737 acres and are also found amongst the sellers. The general history of the past and present settlements and other matters affecting the economical history of the parganah have been sufficiently indicated in the district notice. Sir H. M. Elliot found it difficult to fix the assessment of this parganah because of combinations amongst the leading men which he found deterred many from coming forward to engage. The consequence was a low rate of Re. 1-11-11 per acre, which when compared with Kutána (Rs. 3-4-1½) and other similarly situated parganahs shows a great sacrifice of the Government demand. On this account Mr. Forbes has found it difficult to pull up at once the revenue to its proper level.[1]

[1] The settlement report of Mr. Forbes and the minute of the Board of Revenue on this subject should be consulted.

The following statement compares the details of the former and existing settlements :—

Period of settlement.	Total area.	Barren and Revenue-free.	Cultivable.	*Cultivated.*			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres	Acres	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...	121,897	26,511	15,434	14,167	65,785	79,952	95,386	148,220	1 13 8
Present, ...	124,129	12,690	12,870	59,064	39,305	98,369	111,239	210,035	2 2 2

Population.

According to the census of 1872 parganah Bágpat contained 120 inhabited villages, of which 17 had less than 200 inhabitants; 40 had between 200 and 500; 26 had between 500 and 1,000; 27 had between 1,000 and 2,000; 6 had between 2,000 and 3,000; and 3 had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Bágpat itself with 7,367 inhabitants.

The total population in 1872 numbered 108,168 souls (49,391 females), giving 558 to the square mile. Classified according to religion there were 91,405 Hindus, of whom 41,506 were females; 16,762 Musalmans, amongst whom 7,885 were females; and one Christian. Distributing the Hindu population amongst the four great classes, the census shows 12,394 Brahmans, of whom 5,691 were females; 4,597 Rajpúts, including 2,025 females; 5,504 Baniyas (2,455 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 68,910 souls, of whom 31,335 are females. The principal Brahman subdivisions found in this parganah are the Gaur (11,214), Bhát (184), Saraswat (55), Dakaut (85), Acháraj (262), Gujráti and Chaurasiya. The Rajpúts belong to the Chauhán (1,392), Tonwár (557), Dhangar, Kachhwáha, Kachhuwa, Mohil, Dahima, Gahlot, and Gaur clans; and the Baniyas to the Agarwál (4,319), Saraugi (649), Dasa, Gindauriya, and Bishnoi subdivisions. Amongst the other castes the following show more than one thousand persons each :—Taga (4,604), Jogi (1,525), Gararíya (1,007), Kahár (2,947), Hajjám (2,175), Barhai (1,594), Lohár (1,319), Ját (12,529), Kumhár (1,853), Chamár (11,961), Bhangi (5,150), Gújar (8,170), and Ahír (6,960). The following show less than one thousand members:—Máli, Koli, Sonár, Bharbhúnja, Dhúna, Juláha, Gosháin, Bairágí, Khattri, Káyath, Chhípi, Kalál, Dhobi, Nat, Lodha, Khatík, Teli, Dhanak, Fakír, and Orh. The Musalmáns are distributed amongst Shaikhs (10,250), Sayyids (106), Mughals (35), Patháns (2,089): the remainder are unspecified.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 932 are

employed in professional avocations, such as Government servants, priests, doctors, and the like; 3,539 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c., 2,443 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 18,332 in agricultural operations; 4,632 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 5,829 persons returned as labourers and 1,165 as of no specified occupation. Taking the total population irrespective of age or sex, the same return gives 28,857 as landholders, 23,042 as cultivators, and 56,269 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 2,576 males as able to read and write out of a total male population numbering 58,777 souls.

Changes.

Previous to 1841 parganah Bágpat contained 165 villages and 166 estates, of which ten were revenue-free. In 1841 six were gained and five were transferred. Again in 1852 two were received and 21 were transferred, leaving 147 villages and 148 estates. Since then 22 new estates have been formed by partition and two have been joined. Nine revenue-free estates have been resumed, and at the recent settlement the numbers were 147 villages (one revenue-free) and 169 estates. Amongst the important villages in this parganah not having separate mention may be noticed the old Rajpút village of Daula, with a population of 3,161 in 1865; Tatíri, inhabited by Rawas, with a population of 2,420; Dahkhauli, with a Ját population of 3,888; Singauli, with an Ahír population of 2,626; Pahládpur Khatka, with Rajpút inhabitants, 2,751; the Ját Kátha, containing 2,691, and Amínnagar Sarái, founded by Amín-ud-dín in the reign of Jahángír, and containing a population of 2,679.

BÁGPAT or Bághpat, a tahsíl of the Meerut district, comprises parganahs Bágpat, Baraut, Kutána, and Chhapraulí. The total area, according to the census of 1872, then, contained 401 square miles and 418 acres, of which 322 square miles and 177 acres were cultivated. The area assessed to Government revenue comprised 398 square miles and 250 acres, of which 319 square miles and 184 acres were cultivated, 34 square miles and 498 acres were culturable, and 44 square miles and 204 acres were barren. The land-revenue for the same year amounted to Rs. 5,14,660 (or with cesses Rs. 5,66,312), falling at the rate of Rs. 2 per acre on the total area, at Rs. 2-0-4 per acre on the area assessed to Government revenue, and at Rs. 2-7-11 on the cultivated acre. The total population numbered 247,944 souls (113,797 females), giving 617 to the square mile, distributed amongst 237 villages. The same statistics show 16 insane persons, 10 idiots, 25 deaf and dumb, 456 blind, and 20 lepers in the tahsíl. All other matters pertaining to the history or description of the tahsíl will be found under the district notice and separately under each parganah.

BAGSÁR or Baksár, also known as Bazár Gangadharpur, a town in parganah Garhmuktesar and tahsíli Hápur of the Meerut district, is distant 23 miles from Meerut. In 1865 the population was 1,807, and in 1872 was 1,937. There is a second-class police-station here. It is said to have been one of the muhallas of Hastinápur. The village was given in *jágír* to Nanak Sháhi fakírs. The following account of this fakír colony was obtained from the present Mahant: "The *muáfi* (revenue-free) villages granted to us by Alamgír II. were six in number: we have all of them to the present day. Four are in this district, *viz.*, Bagsár Lilsári, Muhammadpur, Khadálya, and Gordhanpur. We have had Bagsár for head-quarters for more than one hundred years. The Mahant in Alamgír II.'s time was Bába Dargáhi, and he got the *muáfi* grant extended to his *chela* Mast Rám. In Lilsári, Bába Dargáhi performed penance *(tapasya)*, and his *samádh* is in that village. On the Basant Panchami (January or February) of each year a fair is held at the spot. Mast Rám was succeeded by Ganga Rám, and he by Sháhzádah Sháh, and he by me. Every one, fakír or traveller, is entitled to one ser of flour a day, for our institution is a *sadábart* (or perpetual frankalmoigne). This system was inaugurated by Mast Rám. None of us have wives, *i. e.*, we are not *grihasthas*. The ruling Mahant chooses in his lifetime his successor, the man whom he esteems wisest and fittest. No objection can be raised to his selection. In Bagsár we have from 50 to 60 Nának Sháhi fakírs and a few at Lilsári. Bába Dargáhi was *parota*, or fourth in descent from Nának Sháh. We admit as *chelas* Brahmans, Khattris, Játs, Baniyas, and Káyaths only. The *chelas* when young are instructed in reading and writing, and all are supported out of the revenues of our villages. We have no marks on our bodies denoting that we are fakírs. Our distinguishing marks are high-peaked caps and a *saili* (necklace). Our mode of writing is called Gurumukhi. We teach the Gurugranth to our *chelas*. There is no restriction regarding the *choti* (tuft of hair) or the wearing of hair. The first ceremony a *chela* has to go through is a public bathing and shaving."

BAHÁDURGARH, a village in parganah Púth and tahsíli Hápur of the Meerut district, is distant 32 miles form Meerut. This place had in 1865 a population of 2,353 souls, and in 1872 of 2,726. The village was bestowed by Jahángír on Nawáb Bahádur Khán, Pathán, who changed the name of the place from Garh Nána to Bahádurgarh. It was the head of a Pathán *halka*, or circle of 12 villages. The people are quarrelsome, and it has been once found necessary to hold the estate by direct management. At Mustafabad, in the north of this parganah, is the small village of Rája Karan, long ago in ruins. The spot is now known as Rája Karan-ká-khera, and is said to mark the site of a village founded by the Karna mentioned in the Mahábhárata. There is a district post-office here.

BAHRAMBÁS, a small village of 258 inhabitants in parganah Hápur of the Meerut district, is distant 23·6 miles from Meerut. It has a police-station.

BAHSÚMA or Bihsambha, a town in parganah Hastinápur and tahsíl Mawána of the Meerut district, lies 23 miles from the civil-station on the Bijnaur road. The population in 1865 amounted to 4,184, consisting for the most part of Játs, Gújars and Baniyas, and the population in 1872 was 3,995, occupying 1,290 houses. Tradition says that this place was one of the muhallas of Hastinápur in which the Vaisyas were located. The town is now greatly diminished in importance since Rája Nain Singh's government was removed from it. It is said that a hundred years ago there were 22 bankers who granted drafts in the place. Raja Nain Singh's house is here, and also a fort built by him. Nain Singh had other forts in this parganah, at Niloha, Sonda, and Muhammadpur Sikahra. The saddlery of Bahsúma is noted in this district for its excellence. There are good encamping-grounds, a second-class police-station, a post-office, and a market every Tuesday.

The Chaukidári Act is in force in Bahsúma, and in 1873 supported a village police numbering five men of all grades at an annual cost of Rs. 282. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 930, falling at Re. 0-3-8 per head of the population and Re. 1-0-4 per house assessed (911). The expenditure during the same year was Rs. 491.

BALENI, a village in parganah Bágpat and tahsíl Gháziabad of the Meerut district, is distant 15¾ miles from Meerut. It is a village of great antiquity, peopled by Ahírs. The name is said to be derived from the sage Válmíki, whose *asthana* was in this place when a jungle. A temple was built on the fabulous spot a short time since. There is a ferry,[1] a second-class police-station, and a post-office here. The population in 1865 was 2,139, and in 1872 was 1,590.

BAMNAULI or Bamnaul, a town in parganah Barnáwa and tahsíl Sardhana of the Meerut district, lies 19 miles from Meerut. In 1865 the population was 3,791, and in 1872 was 4,086, consisting for the most part of Játs. The present village is said to be 500 years old. There are several kheras and hillocks round about. One is called Budhi Bamnauli, founded by Rám Dás, Brahman, ancestor of some of the present inhabitants: hence the name Bamnauli. Others are the Karál, Kandhaura and Hariyáti *tilas*, regarding none of which is anything known. Tradition says the Marka hillock was erected to commemorate a terrible fight between the hostile Játs of Baraut and Doghat. The hillock covers

[1] The net revenue from the ferry was in—

	Rs.		Rs.		Rs.		Rs.
1863-64,	40	1865-66,	2,350	1867-68,	530	1869-70,	1,550
1864-65,	200	1866-67,	249	1868-69,	1,760	1870-71,	1,987

From 1866 to 1868 the ferry was held under direct management.

seven bighas of land. Of the Dhelna *tíla* nothing is known. The Bhaironwala *tíla* is so called from one Bhairon, a Jogi, who used to graze his cattle on the spot.

BARA PARTAPPUR, a village in parganah Meerut, is distant five miles from Meerut. The population in 1872 was 719, and it possesses a police-station.

BARAUT, the chief town of the parganah of the same name in the Meerut district, is distant 27 miles from Meerut. In 1847 the population was returned at 12,450 souls, and in 1853 at 7,475. In 1865 the numbers were 8,081, and in 1872 were 7,056, of whom 5,101 were Hindús (2,396 females), and 1,955 were Musalmáns (937 females). It is said to be 1,100 years old. Baraut is a very old commercial town and contains many brick-built houses inhabited by Saraugi bankers. It lies close to the left bank of the Eastern Jumna canal, amid a perfect network of distributaries. The main canal runs nearly through the middle of the town lands, giving off the Rárau and Shaikhupur rajbahas to the west, whilst it forms the western boundary of the town site itself. To the north and east of the site the Míránpur distributary flows until it joins the Halwári distributary on the south-east, whilst the Bauli rajbaha runs south from the Baraut canal bridge to the Aláwalpur rajbaha. Owing to these complicated canal works the natural line of drainage which rises near Bijraul and passes by Bazídpur, Halwári and Bám, and is traceable to the west of the canal in Ladwári, which adjoins Surírpur, and in Niwári to the Jumna, is now impeded by the main canal near Aláwalpur, and the water backs all through, and there is much over-saturation of the soil. But, as already noted, steps are being taken to remedy these defects. Notwithstanding that the site is fairly high, the water-level in wells has risen, in January, from 28 and 30 feet to 8 and 10 feet from the surface, and with this rise fever and spleen enlargement have begun to prevail, no doubt enhanced by the excavations forming receptacles for much stagnant water which exist on all sides of the town. Entering the town on the south, by its principal way, the road is low and broken, and winds through the shoemakers' quarter to a ruined gateway, beyond which it divides into two streets. That to the left is of little importance: it has no shops and leads to the grain market (anáj mandi). The street to the right is the principal bazarway, and is paved with bricks, draining to the centre, and leads to the old market (purána mandi). The shops are not important, and two old saráis opening from the road are built of mud, but are large enough for the trade of the town. The two markets are joined by a small bazar, and westward a road connects the grain market with the old fort now occupied as a police-station. The fort is well raised, and from it a bird's-eye view of the site shows that there are many flat-roofed masonry houses in the town with mud-built out-offices embosomed in trees.

The site.

From the canal a metalled circular road winds by the north-east and south sides of the town, and near the eastern portion of this new road a new bazar has been laid out with shops and a double row of trees, and is connected with the old bazar by a short line of road. The site is very low and requires draining. There was formerly a considerable trade in ghi and safflower in Baraut. The first has declined, it is said, owing to the restrictions imposed by the municipal committee and the opening of new marts, and the latter from the decrease of the cultivation of safflower in the neighbourhood. There is a first-class police-station, post-office, and a school here. The municipality is managed by a committee of thirteen members, of whom three are official and ten are elected by the tax-payers. The income is derived from an octroi, which in 1874-75 fell at Re. 0-10-11 per head of the population. The following statement shows the income and expenditure for four years:—

Receipts.	1870-71.	1871-72.	1872-73.	1874-75.	Expenditure.	1870-71.	1871-72.	1872-73.	1874-75.
	Rs	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
Opening balance, ..	8,49[illegible]	3,603	6,319	3,259	Collection, ...	907	772	708	712
Class I. Food and drink.	3,762	2,9[illegible]6	2,689	2,959	Head-office, ...	127	132	149	36
„ II. Animals for slaughter.	7	12	14	62	*a*. Original works,	3,852	2,470	4,500	3,431
					b. Supervision,	...	155	...	60
„ III. Fuel, &c.,	66	125	187	163	*c*. Repairs, &c.,	286	86	580	373
„ IV. Building materials.	205	161 222	175 283	208 292	*d*. Compensation,	2,000	...	...	...
					Police, ...	1,213	1,318	1,466	1,643
„ V. Drugs, spices	268	62	42	76	Education, ...	325	300	43	313
„ VI. Tobacco,	108	813	726	742	Conservancy, ...	613	604	576	556
„ VII. Textile fabrics.	...	205	335	338	Charitable grants,	180	182	183	338
„VIII. Metals, ...					Gardens, ...	120	58	41	...
Total of octroi, ...	4,416	4,506	4,450	4,839	Miscellaneous, ...	123	67	268	248
Tax on carriages, &c.	357	316	...	...					
Rents, ...	7	50	...	3					
Extraordinary, ...	...	3,914	7	52					
Pounds, ...	...	40	127	262					
Fines, ...	73	34	33	90					
Total, ...	13,349	12,463	11,007	8,505	Total, ...	9,746	6,144	8,513	7,780

The following statement shows the value and character of the imports for two years. The value of the grain consumed per head of the population in 1871-72 was Rs. 6-12-10, and the quantity in 1872-73 was mds. 7-3-7 :—

Article.	Value in 1871-72.	Quantity in 1872-73.	Article.	Value in 1871-72.	Quantity in 1872-73.	Consumption per head in 1872-73.	Article.	Value in		Consumption per head in 1872-73.
								1871-72.	1872-73.	
	Rs.	Mds.		Rs.	Mds.	Md. s. c.		Rs.	Rs.	Rs. a. p.
Wheat, ...	44,018	24,639	Gúr, ...	9,542	2,962	0 14 11	Fuel, ..	1,847	1,770	...
Joár, ...	236	1,196	Khánd, ...	30,396	2,730	3 2 8	Oil, ..	4,284	3,329	0 6 7
Gram, ...	3,583	3,473	Sugar, ...	5,970	1,713	0 11 8	Drugs and spices.	4,742	6,043	0 11 6
Múng, ...	1,169	1,895	Shíra, ...	1,124	118	0 2 6	Tobacco, ...	988	675	0 1 3
Moth, ...	2,935	4,895	Pán (bundles.)	232	172	...	Building materials.	5,155	5,808	...
Maize, ...	1,983	1,953	Vegetables,	8,129	2,094	...	Cloth, ...	54,220	79,378	9 7 2
Mash, ...	3,266	1,545	Ghi, ...	7,151	557	1 6 2	Metals, ...	13,689	22,307	2 10 6
Rice ...	10,820	4,543	Fodder, ...	949	690	...	Animals, ...	377 heads.	197 heads.	...
Oil-seed, ...	...	1,384								

The town is divided into three pattis ; those owned by the Játs were confiscated for rebellion in 1857 and purchased by the Afghán Ján Fishán Khán of Sardhana. The new bazar is built on one of these confiscated pattis. Baraut was the head-quarters of a tahsíl transferred to Bágpat after the mutiny. It still possesses a police-station and post-office, a fair bazar, with abundant supplies, and good water. An Anglo-vernacular school was established here in 1871, but failed from want of support. There is one fine Hindu temple and a good Jain temple here. Three miles from Baraut lies the confiscated village of Bazídpur situated on a small hill. Baraut is noted for the manufacture of buckets and cauldrons of iron. The rainfall for seven years, as registered by the canal authorities, has been as follows :—1866-67, 14·7 inches; 1867-68, 22·95 inches; 1868-69, 20·9 inches; 1869-70, 17·75 inches; 1870-71, 27·9 inches; 1871-72, 27·25 inches ; and 1872-73, 27·7 inches.

BARAUT, a parganah in tahsíl Bágpat of the Meerut district, is bounded on the north by the Muzaffarnagar district; on the east by Barnáwa ; on the west by Chhaprauli and Kutána ; and on the south by Bágpat. According to the census of 1872 the total area then amounted to 76 square miles and 239 acres, of which 62 square miles and 308 acres were cultivated. The area assessed to Government revenue contained 76 square miles and 239 acres, of which 62 square miles and 308 acres were cultivated and 5 square miles and 407 acres were culturable.

Condition of the parganah.

The Eastern Jumna canal forms the western boundary of this parganah, and the Krishni Nadi the boundary on the east. Baraut resembles Chhapauli in the character of its soil and

inhabitants. The soil consists of a rich dark loam of exceeding fertility except in seven villages along the Krishni, where there is much sand and the surface is broken up into ravines. In all the 58 estates, except fourteen, the Játs are the proprietors, and practically the cultivators also, for not only do they cultivate all their own villages, but occupy no inconsiderable share of the land in other villages as tenants. The Baraut parganah formed a portion of Begam Sumru's estate and was first settled by Mr. Plowden in 1840, an account of which has been given in the district notice and more fully in the article SARDHANA. It is merely necessary to notice here that Mr. Forbes, at the recent settlement, found startling inequalities in the rates of assessment: while some villages paid only one-third of the net assets, others had to subsist on mere cultivating profits. These heavy rates occurred principally in the Ját villages, and were perhaps due to the fact of the Begam's díwán being a Taga, with whom the Játs have always been at feud. During the currency of the past settlement there have been no unrealised balances, and the transfers have only amounted to twenty per cent. of the total area. The capabilities for well irrigation are excellent, but numbers of the wells have fallen into disuse since the introduction of the canal. The Játs, however, are beginning to construct them again in order to defend themselves against the uncertainties of the canal supply. The principal villages in this parganah not having a separate notice are the Ját village of Barnáwala, with 2,310 inhabitants; Bijrauli, which is also mainly Ját, with 2,494; Bauli, containing 3,938 inhabitants; Dhanaura, Salárnagar (2,873); Kohrari (2,187), and Asara (2,334)—all Ját villages. The population given is that of the census of 1865. Since the last settlement, cultivation has increased twenty per cent. and irrigation has more than doubled. The following statement gives the statistics of Mr. Plowden's settlement in 1840 and Mr. Forbes' assessment in 1866:—

Period of settlement.	Total area.	Barren and revenue-free.	Cultivable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...	48,745	8,170	7,195	14,905	18,475	33,380	40,575	1,07,478	3 3 6
Present, ...	48,754	4,833	4,176	35,329	4,416	39,745	43,921	1,15,400	2 14 5

Population.

According to the census of 1872 parganah Baraut contained 52 inhabited villages, of which 6 had less than 200 inhabitants; 14 had between 200 and 500; 12 had between 500 and 1,000; 13 had between 1,000 and 2,000; 5 had between 2,000 and 3,000; and one had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Baraut itself with 7,506 inhabitants.

The total population in 1872 numbered 56,240 souls (25,952 females), giving 740 to the square mile. Classified according to religion there were 46,063 Hindús, of whom 21,158 were females; 10,177 Musalmáns, amongst whom 4,794 were females. Distributing the Hindu population amongst the four great classes, the census shows 5,233 Brahmans, of whom 2,399 were females; 90 Rajpúts, including 42 females; 3,435 Baniyas (1,546 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 37,305 souls, of whom 17,171 are females. The principal Brahman subdivisions found in this parganah are the Gaur (4,678), Bhát (76), Sarasút, Acháraj (198), Dakaut and Gujráti. The Rajpúts belong to the Chauhán (30) and Tonwár clans, and the Baniyas to the Agarwál (1,346), Saraugi (1,926), and Gadariya subdivisions. Amongst the other castes the following comprise more than one thousand persons each:—Kahár (2,982), Ját (14,595), Chamár (6,825), Bhangi (2,625), and Jaláha (1,021). The following have less than one thousand members each:—Taga, Máli, Jogi, Gararíya, Hajjám, Barhai, Sonár, Lohár, Kumhár, Bharbhúnja, Gújar, Gosháin, Ahír, Bairágí, Chhípi, Kalál, Nat, Khatík, Darzi, Fakír, and Orh. Musalmáns are distributed amongst Shaikhs (5,034), Sayyids (85), Mughals (90), and Patháns (320): the remainder are entered without distinction.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 474 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,691 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,258 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 8,574 in agricultural operations; 2,633 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 3,418 persons returned as labourers and 869 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 10,143 as landholders, 13,625 as cultivators, and 32,472 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,483 males as able to read and write out of a total male population numbering 30,288 souls. In 1852 Baraut contained 51 estates, with an area of 46,648 acres, and in 1853 these were increased to 55 estates, with an area of 48,748 acres. The tahsíl establishment was removed from Baraut to Bágpat after the mutiny in 1857.

Barnáwa, the chief town of the parganah of the same name in the Meerut district, is distant about 19 miles from Meerut, close to the junction of the Krishni and Hindan rivers. The population in 1865 was 2,724, and in 1872

was 2,544, living in 739 houses. The inhabitants are chiefly Hindus. The site is fairly raised on the sandy bank above the Hindan, and water in wells is found at a depth of from six to ten feet from the surface. Drinking-water is obtained from masonry wells, and is reckoned to be good and wholesome outside the town, but brackish and bad within. There are few trees near. The rain-crop is *joár* and the rabi crop is wheat, whilst rice is not grown, and there is no canal irrigation near. The high-lands on the bank of the Hindan here are composed of sand and clay, fissured and water-worn into small ravines. The bed of the river is broad and sandy and is free from quicksands and swamps. Barnáwa is said to have been inhabited by Raja Ahibaran at a very early period. In fact some say that it was an outlying fortress of Hastinápur, and that the little hill to the south of the town called the Lákha Mandap was the real scene of the attempt to burn the Pándavas in the house made of wax which the Mahábhárata places at Varanávata or Allahabad. Another story is that the hill received the name as being the site of some austerities performed by one Lákha Pandit. The *tila* of the Lákha Mandap is about thirty acres in extent and one hundred feet high. It is rendered more imposing by the *khánkáh* with the dargáhs of Badr-ud-dín and Sháh Ala-ud-dín built about 500 years ago. There are numerous tombs on the hill belonging to the family of the proprietors of Shaikhpura. An *urs* or religious fair is held annually in the hot season, called 'Mela urs Chishti Ala-ud-dín'. Doghat, noted for its leather, is in the Barnáwa parganah, as also Ranchhor, where there are two kheras. At Táwelagarhi the stables of an old Raja of Barnáwa are said to have been situated. At Sirsár is a fort in ruins said to have been built by one Jalál-ud-dín about 700 years ago, who with his Heráti countrymen settled here and eventually migrated to Shaikhpura, where his descendants still reside. Barnáwa was the head-quarters of the Begam's tahsíl, and on her death was made subsidiary to Baraut, and after that to Sardhana. The Begam's fort has lately been sold by Government: it was built about 1802 A.D., of burned brick. The owners of the land are Mughals, Afgháns, and Tagas. The Tagas were at one time sole owners. The Baniyas are all of the Jain sect. There is a public ferry here, the net revenue of which has been in 1864-65, Rs. 85; 1866-67, Rs. 480; 1868-69, Rs. 515; 1870-71, Rs. 700; 1865-66, Rs. 240; 1867-68, Rs. 500; and 1869-70, Rs. 700. The Chaukidári Act is in force in Barnáwa, and in 1873 supported a village police numbering five men of all grades at an annual cost of Rs. 288. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 407, falling at Re. 0-2-6 per head of the population and Re. 0-8-9 per house assessed (739). The expenditure during the same year was Rs. 46.

Site.

BARNÁWA, a parganah in tahsíl Sardhana of the Meerut district, is bounded on the north by the Muzaffarnagar district, on the west by Baraut, on the east

by Sardhana, and on the south by Bágpat. According to the census of 1872 Barnáwa contained a total area of 113 square miles and 434 acres, of which 78 square miles and 412 acres were cultivated. The area assessed to Government revenue comprised 113 square miles and 434 acres, of which 78 square miles and 412 acres were cultivated and 11 square miles and 531 acres were culturable.

Condition of the parganah.

The Hindan flows down the eastern boundary, and the Karsuni river runs south-east, through the centre of the parganah, joining the Hindan a little below Barnáwa. The northern division, containing the large villages of Tikri, Nirpura, Daha and Doghat, is known as the 'Chaugaon' or 'tract of the four villages,' while the southern part is known as the 'Des.' The northern division has a considerable quantity of *khádir* or river-bed land. That lying along the Karsuni is somewhat sandy, though not extensive, whilst the Hindan *khádir* is not only rather sandy but in some places is injured by '*reh*.' Between the *khádir* and the uplands lies a wide belt of broken ground occupied chiefly by village sites. Above this in the uplands the soil is good and admits of the construction of *kuchcha* wells, in some parts without even a wooden lining. But the water is deep, about 45 feet, and irrigation is consequently laborious. From Dhanaura to the Bánganga a natural drainage-channel flows into the Hindan known as the Banang ravine. It seems to be widening year by year, and breaking up the land on its banks. Between Nirpura and Tikri there is a similar channel, dry in the hot season and containing a large volume of water in the rains, but not causing the same disturbance of surface as the Banang ravine. Along this depression lies the only poor sandy tract in the uplands. It passes through Nirpura, Tikri, Kheri, and Kanhar. The portion of the parganah lying to the south of the Karsuni has a similar *khádir* tract on the Hindan, a belt of broken land between it and the uplands (*bángar*) and an upland tract. The riverine land is similar to that on the north, with perhaps a little more *reh*, whilst the uplands are exceptionally good, bearing fine crops of wheat in the irrigated and gram in the unirrigated lands. Throughout the parganah, sugarcane, except in the canal-irrigated villages, is inferior to that produced in other parganahs, but cotton is extensively grown. Wheat occupies 25 per cent. of the total area, sugarcane 6, and cotton 11 per cent. The capabilities for well-sinking are good: on the edge of the lowlands the depth of water from the surface is 48 feet, while to the south and west it is 30 and 36 feet. Only fifteen villages are fully watered from the canal. Irrigation has increased from 11,047 acres at the past settlement to 26,336 acres, of which 21,194 acres are watered from wells, 4,406 from canals, and 738 from tanks. Cultivation has advanced from 38,262 acres to 50,258 acres, or 31·4 per cent.

The general history of the past and present settlements has already been given under the district notice, and an account of the Begam Sumru's

administration under Sardhana. The mass of the landowning and cultivating classes is Játs. Kahárs have one village, Tagas two, and Musalmáns two.

Settlements.

Rawas have a cluster of villages in the south, where are also a few Gújar and Hindu-Rajpút villages. The rest are Játs. The Játs of the northern division are of a different clan from those in the south, and the former profess to call it a grievance that the Játs of Bamnauli should possess lands north of the Karsuni. The tenures are almost entirely *bháyáchára*, the few villages confiscated for rebellion being the only *zamíndárí* tenures in the parganah. The transfers during the currency of the old settlement were very few, amounting to only 6 per cent. by sale and 3 per cent. by mortgage, principally due to the pressure of the famine year 1860-61. Mr. J. Porter writes:—"The villages to the north of the Karsuni seem to be, as a rule, in a worse condition than those in the south. The canal is the chief cause of difference. The north suffered severely in the year of famine, and has hardly yet recovered from the effects of that calamity. The sugar plantation received a great check: loss of cattle and men and want of capital obliged the cultivators in many villages to curtail their sugar cultivation. So hard-pressed were they in some villages that they were obliged to sell their sugar presses to the canal villages of Chhaprauli in order to raise money." As noticed under Sardhana the Játs were heavily assessed at the last settlement, and in many cases the revenue has been lowered in their villages, but the loss has been made up by enhancements elsewhere. The Government demand was raised at settlement from Rs. 1,20,795 to Rs. 1,28,950, or 6·7 per cent., though owing to increase in cultivation the incidence on the cultivated area has fallen from Rs. 3-2-4 per cultivated acre to Rs. 2-8-11.

The following statement compares in detail the statistics of the past and present settlements:—

Period of settlement.	Total area.	Barren and revenue-free.	Cultivable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...	71,517	18,140	15,115	11,047	27,215	38,262	53,377	1,20,795	3 2 6
Present, Khádir,	5,912	1,586	1,074	787	2,465	3,252	4,326	1,28,950	2 9 0
Bángar,	66,842	13,293	6,543	25,549	21,457	47,006	53,549		

Population.

According to the census of 1872 parganah Barnáwa contained 63 inhabited villages, of which 11 had less than 200 inhabitants; 18 had between 200 and 500; 14 had

between 500 and 1,000; 10 had between 1,000 and 2,000; 5 had between 2,000 and 3,000; and 4 had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Tíkri, with 5,698 inhabitants. The total population in 1872 numbered 64,997 souls (30,103 females), giving 570 to the square mile. Classified according to religion there were 55,430 Hindus, of whom 25,645 were females; 9,567 Musalmáns, amongst whom 4,458 were females. Distributing the Hindu population amongst the four great classes, the census shows 6,047 Brahmans, of whom 2,814 were females; 240 Rajpúts, including 107 females; 4,192 Baniyas (1,948 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 44,951 souls, of whom 20,776 are females. The principal Brahman subdivisions found in this parganah are the Gaur (5,667), Sarasút (31), Bhát (94), Dakaut (49), Acháraj (47), and Dasa. The Rajpúts belong to the Pundír and Tonwár clans, and the Baniyas to the Agarwál (707), Saraugi (2,977), Gindauriya (207), and Bishni (282) subdivisions. The other castes having more than one thousand members each are the Kahár (3,357), Hajjám (1,342), Ját (16,858), Chamár (7,446), Bhangi (2,702), and Gújar (1,552). Those with less than one thousand members are the Taga, Máli, Jogi, Garariya, Barhai, Sonár, Lohár, Kumhár, Bharbhúnja, Jaláha, Gosháin, Bairági, Khattri, Kalál, Chhípi, Dhobi, Khatík, Dhanak, Orh, and Banjára. The Musalmáns are distributed amongst Shaikhs (3,018), Patháns (231), Sayyids (72), and Mughals (61): the remainder are not distinguished according to race.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 489 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 2,070 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,153 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 10,531 in agricultural operations; 4,140 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,474 persons returned as labourers and 668 as of no specified occupation. Taking the total population irrespective of age or sex, the same returns give 19,292 as landholders, 10,005 as cultivators, and 35,700 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,303 males as able to read and write out of a total male population numbering 34,894 souls. In 1852 Barnáwa had 80 estates, with an area of 82,304 acres, and in 1853 these were reduced to 72 estates, with an area of 72,562 acres. In 1840 Barnáwa was attached to the Baraut tahsíl, the head-quarters of which were subsequently transferred to Bágpat.

BEGAMABAD, a town in parganah Jalálabad and tahsíl Gháziabad in the Meerut district, is distant 14 miles from Meerut and 28 miles from Dehli. The population in 1865 was 2,997, and in 1872 was 2,889, occupying 645 houses. The town lies on the Dehli Grand Trunk Road, and has now a station of the Panjáb and Dehli Railway. It was founded by one Nawáb Zafar Ali, who purchased the site. The Játs bought the place from him and built a second village to the east of Zafar Ali's site, and called it Budhána. From the Játs the lands passed into the hands of a lady of the Dehli royal family, who called the place Begamabad. There is a temple here built by Ráni Bála Bái of Gwaliar seventy years ago. There are also the ruins of a fine mosque built by Nawáb Zafar Ali just outside the town. There is a road-officer's bungalow, an encamping-ground for troops, a first-class police-station, post-office, telegraph-office, school, bazar, and a good water-supply. The Chaukidári Act is in force in Begamabad, and in 1873 supported a village police numbering six men of all grades at an annual cost of Rs. 288. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 391, falling at Re. 0-2-2 per head of the population and Re. 0-11-7 per house assessed (539). The expenditure during the same year was Rs. 375, which was met from the income and a balance of Rs. 39 from the previous year.

BIJWÁRA or Bajwára, a town in parganah Barnáwa and tahsíl Sardhana of the Meerut district, is distant 23 miles from Meerut. In 1865 the population was 3,484, and in 1871 was 3,469, for the most part Játs. It is said to be 500 years old. This place was confiscated after the mutiny and bestowed by Government on Wiláyat Husain Khán, son of Taj-ud-dín Hasan Khán, vazír of the Nawáb of Lucknow, for his loyalty.

BINAULI, a town in parganah Barnáwa and tahsíl Sardhana of the Meerut district, lies 28 miles from Meerut. In 1865 the population was 2,172, and in 1872 was 2,257, occupying 599 houses in the Krishni-Hindan duáb. The soil around is sandy, mixed with clay enough to give it a yellowish colour. Water in wells is found at a depth of 40 feet from the surface; within the town it is brackish and outside it is sweet. To the west of the town is a large unsightly excavation reaching close up to the town and often full of stagnant water. The space between it and the town is covered with filth of all kinds. The surface drainage runs southwards towards the Krishni. The chief residents are Saraugi Baniyas. There is a second-class police-station, a post-office, and a brick-built sarai said to have been constructed some 150 years ago. The Chaukidári Act is in force in the town, and in 1873 supported a village police numbering six men of all grades at an annual cost of Rs. 240. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 93, falling at Re. 0-0-7 per head of the population and Re. 0-2-5 per house assessed (599). The expenditure during the same year was Rs. 46.

CHANDLAWAD, a village of parganah Kithor in the Mawána tahsíl of the Meerut district, lies 17 miles from Meerut. It is also called Mahálwa, and had in 1865 a population of 2,556 and in 1872 of 2,478, for the most part Tagas (Hindus). The diwán (or agent) of Nain Singh built the large house called the Mahál. There is a market on Wednesdays.

CHHAPRAULI, a parganah in tahsíl Bágpat of the Meerut district, is bounded on the north by the Muzaffarnagar district, on the east by Baraut, on the west by the Jumna, and on the south by Kutána. The census of 1872 gives the total area at 58 square miles and 335 acres, of which 45 square miles and 534 acres are cultivated. The area assessed to Government revenue amounts to 58 square miles and 307 acres, of which 45 square miles and 506 acres are cultivated and four square miles and eighteen acres are culturable.

Condition of the parganah.

Five villages lying along the Jumna in this parganah, on the edge of the high cliff of the uplands, have a belt of sandy soils, but with this exception the soil of the entire parganah consists of a rich black loam of great fertility, which produces fine crops of wheat, tobacco and sugarcane. Both Sir H. M. Elliot in 1836 and Mr. Forbes in 1866 consider this parganah as the finest in the district, and more capable than any other of bearing a uniform average of assessment. Though wells have been in a great measure superseded by canals the well capabilities are good: the water is near the surface and *kuchcha* wells can easily be sunk. The Játs are proprietors in all the 31 villages except four, and their position amongst the cultivating body bears even a greater proportion to the whole, as the Játs not only till their own estates but hold a considerable quantity of land as tenants in other estates. Transfers amounted to only 16 per cent. of the total area, of which four per cent. was by public sale, eight by private sale, and four by mortgage. In 1829 the Játs owned all but one village. There has not been any remission of revenue during the currency of Sir H. Elliot's assessment, and the only two cases of default were at once met by a threat of transfer to other proprietors. The great success of the past settlement has no doubt in a great measure been due to its having been based on village capabilities, with a due regard both to particular circumstances affecting each village and the general results obtainable from an all-round rate on the whole parganah. There have been few changes in area beyond the addition in 1841 of the Tánda portion of the small parganah of Tánda Phugána, including twelve villages, and the transfer in 1852 of four villages to other parganahs. The result of the present assessment has been to increase the incidence of the land-revenue on the total and culturable areas, with a reduction on the cultivated area—a result due to the small margin now left for extension of cultivation. The revenue has risen from Rs. 82,801 to Rs. 89,725, giving a rate per cultivated acre at settlement of Rs. 3-1-5 as compared with Rs. 3-5-2 before.

Mr. Glyn in 1829 at first recommended this parganah for permanent settlement, but subsequently withdrew his letter and permitted a reduction. Sir H. Elliot found the parganah very much under-assessed. In the eighteen villages assessed by him, the revenue from 1829-30 to 1839-40 was fixed by Mr. Glyn at Rs. 47,915, or the last assessment (Rs. 40,636) *plus* an increase of Rs. 7,278 per annum, which was enhanced by Sir H. Elliot to Rs. 53,549 for the years 1840-41 to 1844-45, and to Rs. 60,021 for the years 1845-46 to 1853-54. The Tánda villages were at this time included in parganah Kairána.

Settlement.

The following statement compares the past and present settlements in detail:—

Period of settlement.	Total area.	Barren and revenue-free.	Cultivable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...	36,491	4,853	6,726	8,194	16,718	24,912	31,638	82,801	3 5 2
Present, ...	37,429	3,738	4,767	27,439	1,485	28,924	33,691	89,725	3 1 7

According to the census of 1872 parganah Chhaprauli contained 20 inhabited villages, of which one had less than 200 inhabitants; one had between 200 and 500; five had between 500 and 1,000; six had between 1,000 and 2,000; one had between 2,000 and 3,000; and two had between 3,000 and 5,000. The towns containing more than 5,000 inhabitants were Chhaprauli, with 5,594 inhabitants, and Kirthal, with 5,651 inhabitants. The total population in 1872 numbered 37,975 souls (17,511 females), giving 644 to the square mile. Classified according to religion there were 31,756 Hindus, of whom 14,581 were females; 6,219 Musalmáns, amongst whom 2,930 were females. Distributing the Hindu population amongst the four great classes, the census shows 3,362 Brahmans, of whom 1,512 were females; 23 Rajpúts, including 9 females; 2,462 Baniyas (1,111 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 25,909 souls, of whom 11,949 are females. The principal Brahman subdivisions found in this parganah are the Gaur (3,159), Bhat, Sarasút, Acháraj (63), and Gujráti. The Rajpúts belong to the Chauhán clan, and the Baniyas to the Agarwál (1,116), Saraugi (1,186), and Bishni (141) subdivisions. The other castes showing more than one thousand persons each are the Kahár (2,401), Ját (11,071), Chamár (4,324), and Bhangi (1,733). The following have less than one

Population.

thousand members each:—Máli, Jogi, Garariya, Hajjám, Barhai, Sonár, Lohár, Kumhár, Bharbhúnja, Jaláha, Gújar, Gosháin, Bairági, Káyath, Chhípi, Kalál, Darzi, Malláh, and Lahera. Musalmáns are distributed amongst Shaikhs (4,517), Sayyids (29), Mughals (28), and Pathán (362): the remainder are unspecified.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 468 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,161 in domestic service, as personal servants, water-carriers, barbers, sweepers, washer men, &c.; 3,257 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 5,399 in agricultural operations; 2,006 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There was only one person returned as labourer and 555 as of no specified occupation. Taking the total population irrespective of age or sex, the same returns give 10,010 as landholders, 5,345 as cultivators, and 22,620 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 785 males as able to read and write out of a total male population numbering 2[illegible],464 souls. Chhaprauli was in 1196 *fasli* (1789 A.D.) assigned in *jágír* to Sháh Nizám-ud-dín, comptroller of the imperial household, by whom it was held until the beginning of 1205 *fasli* (1798 A.D.), when he was dispossessed by Lakwa Dáda about the close of the same year or the beginning of 1799 A.D. Sháh Nizám-ud-dín was reinstated in the *jágír* by Sindhia and remained in possession until the rains of 1801, when the *jágír* was resumed by Mr. Perron, and from that time formed a portion of the revenue-paying lands. Kuri Dhárki was held in *jágír* by the Nawáb of Jhajhar until 1835-36, when it lapsed to Government. The principal villages not separately noticed are Rataura, Ramala, Súb and Júb, all chiefly inhabited by Játs.

CHHAPRAULI, a large village in the parganah of the same name in the Meerut district, is distant 5 miles from Meerut. In 1847 the population numbered 13,878 souls; in 1853 the numbers are not recorded, but in 1865 they were 5,266, and in 1872 there were 5,594 inhabitants, of whom 4,691 were Hindús (2,177 females) and 903 were Musalmáns (440 females). The great number in 1847 is due to the inclusion of outlying hamlets in the town census. The village contains about 1,200 houses, all but two of which are mud-built. There are five pattís or subdivisions—Dhaknausya, Chandoiyan, Dhádán Tílwára, Bhauála, and Jagmalán. The bazar consists of two narrow unmetalled streets, which cross each other at right angles to form a *chauk*. There is also a small row of shops called the Náya Bazar, and a small market-place and saráí. The site is fairly

Site.

raised, the centre is high, the natural drainage is good, and there are few unsightly excavations around the site. The water in wells is found at a depth of 15 feet from the surface, but owing to the good drainage the public health is not affected. There is a large community of Saraugi Baniyas here, occupying about sixty houses and possessing a fine temple. The Játs are said to have colonised this place some 1,100 years ago, and to have given it the present name because they lived in *chhapars* or straw huts (!) About 150 years ago they received amongst them the Játs of Mírpur, who had been almost ruined by the incursions of the Sikhs, and since then the town has increased in numbers. It is purely a large agricultural village, without trade or manufactures. A market is held on Tuesdays, and there is a station of police and a post-office here.

DABATHWA or Dabathuwa, a town in parganah Sardhana of the Meerut district, is nine miles from Meerut. The population in 1865 was 2,446, and in 1872 was 2,388. It is said to have been founded by some Sayyids more than 600 years ago. There is a considerable sugar trade carried on by the Mahájans of this village, and large quantities of sugar are refined here. There are two kheras close by Dabathwa. The khera Chauhán was peopled with Chauháns by the Sayyids, but the colony went to ruin 400 years ago. The Gújars then lived there, and after them the Játs, who appropriated both the small villages whose site is now marked by the khera and the parent village as well. They are the zamíndárs to this day. The second khera is a small one and is known simply as the khera.

DÁDRI, a village in parganah Meerut of the Meerut district, is distant 16 miles from the civil station. It was formerly one of the residences of the Gújar chief, Nain Singh, through the site of whose fort the railway now runs. The rajbaha near the site is said to impede the local drainage and to affect injuriously the public health. The population in 1872 numbered 1,326 souls, chiefly Gújars. There is a police-station here.

DÁHA, a large village in parganah Barnáwa and tahsíl Sardhana of the Meerut district, is distant a little more than 23 miles from Meerut. In 1865 the population was 3,351, and in 1872 was 3,136. It is said to be 700 years old. The Játs of this village have always been a troublesome and aggressive race, and are credited with many acts of violence, among which was the destruction of Tálibpur some two centuries ago. Dáha was confiscated after the mutiny and is now held by direct-management. It has a second-class police-station and a district post-office.

DÁSNA, the principal town of the parganah of the same name in the Meerut district, is situated 23 miles from Meerut. The population in 1852 was 4,302, and in 1865 was 4,165. In 1872 there were 5,605 inhabitants, of whom 2,564 were Hindus (1,210 females) and 3,041 were Musalmáns (1,555 females),

occupying 1,160 houses. A mile to the east flows the Ganges canal, and a channel from the right Dásna rajbaha flows past the village site. The place was founded by Raja Salársi, a Rajpút, in the time of Mahmúd Ghaznavi. It was ravaged by Ahmad Sháh Abdali in his great irruption in 1760, when he pulled down the large fort. In the muharram an *urs* or religious fair is held at the town in honour of Sheikh Alladiya Makhdúm Sháh Wiláyat. At the Mandir Devi, too, there is a small bi-annual Hindu fair. Mr. Michel's indigo factory is established at Masúri in the neighbourhood of this town. The enormous quantity of indigo grown in this parganah for the supply of this, Mr. Skinner's, and other factories is illustrative of the trading spirit that has sprung up in these Provinces since the advent of the British Government. There is a second-class police-station and a post-office here. The Chaukidári Act is in force in Dásna, and in 1873 supported a village police numbering twelve men of all grades at an annual cost of Rs. 576. This is met from a house-tax, which in 1872 yielded a revenue of Rs. 455, falling at Re. 0-1-3 per head of the population and Re. 0-7-5 per house assessed (982). The expenditure during the same year was Rs. 499, which was met from the income and a balance of Rs. 49 from the previous year.

DÁSNA, a parganah in tahsíl Ghaziabad or Ghaziuddínnagar, in the Meerut disrict, is bounded on the east by Hápur, on the north by Jalálabad, on the west by Loni, and on the south by the Bulandshahr district. The census statistics of 1872 gives the total area as 137 square miles and 167 acres, of which 102 square miles and 467 acres were cultivated. The area assessed to Government revenue amounted to 130 square miles and 414 acres, of which 100 square miles and 209 acres were cultivated, and of the remainder 10 square miles and 86 acres are returned as unculturable.

Condition of the parganah.

The soils in this parganah consist for the most part of a firm clay admirably adapted for *kuchcha* wells and yielding fine crops of wheat when irrigated. The Ganges canal runs through the whole parganah, and there are few parts of the district that have improved so much during the last thirty years. The irrigated area has increased from 26,454 acires to 46,174 acres, of which 22,943 acres are watered from the canal, 22,608 acres from wells, and 623 acres from tanks. The canal has driven out well-irrigation to the extent of 3,846 acres. Cultivation has increased from 47,943 acres to 61,932 acres, and there are still 15,241 acres of good soil under *dhák* jungle awaiting the plough. The general history connected with the past and present settlements and other matters pertaining to the economical history of the parganah have been sufficiently indicated under the district notice. Tarnsfers in this parganah have been frequent, but are mostly due to confiscations for rebellion. Mr. Forbes writes:—"The cause for the rebellion of the Rajpúts is difficult to account for, certainly it was not the result

of heavy assessment and indigence of circumstances. In one or two instances it is well known the people seized the opportunity of fighting out old feuds and rose against their neighbours rather than against the Government, and in one case it is much to be feared the proprietors paid with their estates for the evil deeds of the non-proprietors of other castes." . The Rajpúts strongly predominate throughout the parganah and are better cultivators here than elsewhere. The farming is of the highest order, and the richest crops, particularly cotton and wheat, are extensively grown. Mr. Skinner has a large indigo factory at Dehra.

Dásna in 1807 formed the head-quarters of a tahsíl including Dásna and Shikárpur. The following statement compares the statistics of the past and present settlement:—

Period of settlement.	Total area.	Barren and revenue-free.	Cultivable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...	86,663	12,183	26,537	26,454	21,489	47,043	74,480	97,163	2 0 5
Present, ...	87,848	0,675	15,241	46,174	15,758	61,932	77,173	1,23,050	1 15 9

Population.

According to the census of 1872 parganah Dásna contained 104 inhabited villages, of which 20 had less than 200 inhabitants; 38 between 200 and 500; 22 had between 500 and 1,000; 15 had between 1,000 and 2,000; 5 had between 2,000 and 3,000; and two had been between 3,000 and 5,000. The towns containing more than 5,000 inhabitants are Dásna with 5,605 and Pilkhua with 6,239. The total population in 1872 numbered 81,332 souls (37,785 females), giving 594 to the square mile. Classified according to religion there were 59,082 Hindus, of whom 27,026 were females; 22,163 Musalmáns, amongst whom 10,723 were females; and 88 Christians. Distributing the Hindu population amongst the four great classes, the census shows 7,019 Brahmans, of whom 3,269 were females; 12,501 Rajpúts, including 5,305 females; 4,094 Baniyas (1,812 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 35,468 souls, of whom 16,640 are females. The principal Brahman subdivisions found in this parganah are the Gaur (6,466), Bhát (206), Sarasút, Acháraj, Dasa, and Pallewál. The Rajpúts belong to the Tonwár (3,437), Chauhán (365), Badgújar, Dhangar, Gahlot, Pundír, Bisen, and Janghára clans; the Baniyas to the Agarwál (3,921), Saraugi and Bishni subdivisions. The other castes numbering more than

one thousand persons each are the Koli (2,486), Gararíya (1,335), Kahár (1,351), Hajjám (1,204), Ját (3,662), Kumhár (1,153), Chamár (11,702), Bhangi (3,175), Gújar (1,330), and Ahír (1,531). Those having less than one thousand members are the Taga, Máli, Jogi, Barhai, Sonár, Lohár, Bharbhúnja, Dhúna, Gosháin, Bairági, Khattri, Káyath, Chhípi, Kalál, Dhobi, Teli, Saisi, Kanjar, Rahti, Agariya, Orh, Mewáti, Chai, Ráj, and Ahar. The Musalmáns are distributed amongst Shaikhs (7,609), Sayyids (406), Mughals (194), and Patháns (587): the remainder are undistinguished.

Occupations.

The census statistics show that of the male adult population (not less than fifteen years of age), 352 were employed in professions, 3,097 in domestic service, 1,646 in commerce, 12,939 in cultivating the soil, 2,710 in the mechanical arts and manufactures, while 4,029 were returned as labourers and 837 of no specified occupation. Of the total population the same enumeration gives 16,440 as landholders, 21,734 as cultivators, and 43,158 as engaged in occupations unconnected with agriculture. The educational statistics show only 1,083 males out of a total male population of 43,458 souls as able to read and write. In 1852 there were 145 estates in parganah Dásna, having an area of 109,454 acres; in 1853 these were reduced to 110, with an area of 86,654 acres.

Dáteri, a station of the Great Trigonometrical Survey, is situated in parganah Jalálabad of the Meerut district, in lat. 28°-44′-5″ and long. 77°-41′-24,″ at an elevation of 767·0 feet above the level of the sea. The upper markstone of the survey is situated about half a mile south-east of the village of that name, 4·6 miles south-east of Kalchína, 5·8 miles north-east of Náhal, and about 1·5 miles north-north-west of Pilkhua Girdharpur.

Daurála, a village on the Saháranpur road, in parganah Meerut of the Meerut district, is distant nine miles north from Meerut. The population in 1872 was 3,373. It is situated in a highly cultivated country, watered in every direction by the Ganges canal. There is an encamping-ground for troops, and supplies and water are obtainable. There is a first-class police-station here.

Dhaulari or Dholri, sometimes known as Rasúlpur Dhaulári, a village on the Hindan in parganah Meerut of the Meerut district, lies in lat. 28°-55′-14″ and long. 77°-31′-15,″ at an elevation of 780·8 feet above the level of the sea. The upper markstone of the Great Trigonometrical Survey station is situated on slightly elevated ground near the village. This height was deduced trigonometrically.

Dhaulána, a town in parganah Dásna, in tahsíl Gháziabad of the Meerut district, is situated some distance to the left of the Ganges canal, 25 miles from Meerut. In 1865 the population was 3,667, and in 1872 was 3,175, composed mostly of Hindu Rajpúts, occupying 701 houses. There is a fine temple here dedicated to Málan or Malandi Devi. At one time the people of Dhaulána used

to worship at Nagla Káshi, but about thirty years ago the hostile Rajpúts of these two villages fought at the fair held in honour of the *sati* Malandi, after which they built the present temple. There is a post-office and a second-class police-station. The people still remember its sack by the Sikhs in 1786. The Chaukidári Act is in force is Dhaulána, and in 1873 supported a village police numbering seven men of all grades at an annual cost of Rs. 336. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 345, falling at Re. 0-1-7 per head of the population and Re. 0 7-10 per house assessed (700). The expenditure during the same year was Rs. 362, which was met from the income and balance of Rs. 37 from the previous year.

DOHAR, a village in parganah Jalálabad, is distant 21·5 miles from Meerut. The population in 1872 numbered 1,491 souls. There is a police-station here.

FARIDNAGAR, a town in parganah Jalálabad and tahsíl of Ghaziabad in the Meerut district, is distant 16 miles from Meerut. The population in 1865 was 4,525, and in 1871 was 4,941, for the most part Bilúches and Rajpúts. The village was founded by Nawáb Farídun Khán in the reign of Akbar, who had the neighbouring lands cleared of jungle. The place is one mile off the Hápur and Begamabad road.

FARUKHNAGAR, a village in parganah Loni of the Meerut district, 14 miles north-east of Dehli, on the Meerut and Dehli road, is situated on the right bank of the Hindan, which is here crossed by a ford from two to two and a half feet deep. The country around is open and cultivated, and the roads are good. The Chaukidári Act is in force in Farukhnagar, and in 1873 supported a village police numbering three men of all grades at an annual cost of Rs. 144. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 330, falling at Re. 0-3-5 per head of the population and Re. 1-2-1 per house assessed (291). The expenditure during the same year was Rs. 278, which was met from the income and a balance of Rs. 29 from the previous year.

GARHMUKTESAR, a town in the parganah of the same name in the Meerut district, is situated on the right bank of the Ganges in lat. 28°-47′-10″ and long. 78°-8′-30″, at a distance of 26 miles from Meerut. According to the census of 1847 it had a population numbering 7,168 souls; in 1852 the population was 8,781, and in 1865 it amounted to 8,761. In 1872 the population numbered 7,962 souls, of whom 5,401 were Hindús (2,489 females) and 2,561 were Musalmáns (1,203 females). The town stands on the high cliff of the right bank of the Ganges, four miles below its junction with the Búrh Ganga, and contains 2,458 houses, many of which are brick-built and in good repair. The principal bazar, which is also the principal road, runs from west to east, and

The site.

dips down suddenly as it approaches the khádir of the Ganges. Beginning on the west there are four large saráis for travellers, and beyond this an open space used as a grain market.

Next commences the regular bazar lined with good shops, which towards the edge of the cliff are two-storeyed and brick-built. This road is metalled and paved with bricks in places, and on its descent to the Ganges has been carefully sloped away and a good brick-on-edge causeway with a gentle gradient constructed for the convenience of cart traffic. The houses on either side of the principal street are closely packed together and the lanes are narrow and unmetalled. The drainage throughout is perfect, the rainfall at once running off to the Ganges. A new dispensary has been built between the Brahman and Musalmán quarters, and a new police-station to the north of the town. The site is sandy, but below the sand there is a good stratum of firm soil which admits of wells being built. The drinking-water is good and is found at a depth of from 30 to 50 feet from the surface. As might be expected, there are a great number of Brahmans resident here who are popularly supposed to occupy one-half the town, but there is also a considerable Musalmán element, the head of whom was hanged for rebellion in the mutiny. The town is an agricultural one, and there is little trade except in timber and bambus, which are rafted down the Ganges from the Dún and Garhwál forests. The Chaukidári Act is in force in Garhmuktesar, and in 1873 supported a village police numbering 27 men of all grades at an annual cost of Rs. 1,686. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 3,181, falling at Re. 0-3-9 per head of the population and Re. 1-2-3 per house assessed (1,628). The expenditure during the same year was Rs. 4,861, which was met from the income and a balance of Rs. 4,528 from the previous year.

History.

The place is said to have been a muhalla of Hastinápur, and frequent mention is made of it in the Bhágavat Purána and in the Mahábhárata. There was a very ancient fort here, which was repaired by Mír Bháwan, a Marhatta leader, and was in such preservation at the early period of British rule that only a very small expenditure was necessary to fit the place for a tahsíl. Garhmuktesar is occasionally mentioned by the Persian historians as a garrison town. The name is derived from the great temple of Mukteswara Mahádeo, dedicated to the goddess Ganga. There are four principal temples,—two high, placed on the cliff, and two lower down—in all of which Ganga, formed of white marble and clothed in brocade, is worshipped. The one near the Meerut road contains the sacred well, with the waters of which every one must be washed before his sins are cleansed. Near this temple there are no less than eighty *sati* pillars, marking the spots where wives, in times not so far removed, gave up their lives on the funeral pyre of their departed husbands. The great fair is held on the day of the full moon of Kárttik, when some 200,000 pilgrims congregate here from all parts of the country. Double this number assemble on the sixth and twelfth years, and even greater numbers each fortieth year. Fairs are also held on the Somwáti

Amawás, or the last day of the lunar month when it falls on a Monday; on the full moon of Baisákh; on the ninth day of the light fortnight of Jeth, and on any other day when certain planets are in conjunction with certain others or with certain points of the zodiac. There is a ferry [1] in the rains and a bridge-of-boats for the remainder of the year joining the Meerut and Moradabad metalled roads. There is a first-class police-station and a travellers' bungalow near the town, and an encamping-ground for troops. Formerly both banks of the river for several miles in width were overgrown with a thick grassy jungle and were much infested with tigers, but now the jungle has entirely disappeared owing to the increase of cultivation.

GARHMUKTESAR, a parganah in tahsíl Hápur of the Meerut district, is situated on the right bank of the Ganges, and is bounded on the south by Púth, on the west by Hápur, and on the north by Kithor. According to the census of 1872 parganah Garhmuktesar had, then, an area of 105 square miles and 122 acres, of which 69 square miles and 107 acres were cultivated. The area assessed to Government revenue amounted to 98 square miles and 388 acres, of which 64 square miles and 9 acres were cultivated; of the remainder, 15 square miles and 297 acres were returned as unculturable.

Condition of the parganah.

The parganah is small, and the soil is poor owing to the presence of sandy ridges or dunes which traverse this parganah in many places, so that some villages are situated 'amid prairies of rolling sand.' Although bordering on the Ganges the cultivable land in the river bed is not considerable, but the soils close to the high banks of the river make up for smallness of area in fertility, producing fine crops of rice and sugarcane. In this manner estates with a mixed upland and lowland area make up their revenue. The portions of the upland bordering the *khádir* are, as a rule, cut up into ravines, sandy and unirrigated, with only patches of cultivation entirely dependant upon the winter rains. The general history of the past and present settlements of this parganah has been given under the district notice, as well as of rents and other matters pertaining to its economical history. Irrigation is conducted almost entirely from wells, and though needing canal-irrigation more than any other parganah it receives least. Out of 110 estates the canal reaches only 34 and irrigates only about one-fourth of their total area. It would be among the first parganahs in the district to suffer in times of drought. Still irrigation has trebled since the last settlement. There

[1] The net revenue of this ferry has been—

	Rs.		Rs.		Rs.
1862-63	... 5,329	1865-66	... 11,280	1868-69	... 11,480
1863-64	... 9,353	1866-67	... 9,857	1869-70	... 17,819
1864-65	... 11,230	1867-68	... 12,688	1870-71	... 21,080

and in 1871-72 was Rs. 23,680. The ferry was held under direct management in 1862-63 and in 1866-67.

are at present 308 *pukka* and 304 *kuchcha* wells, working 544 *luos*, in the estates assessed with revenue, but 157 of these are used for drinking purposes alone.

The capabilities for well-sinking, owing to the sandy nature of the soil, are not good except in a few places, and here every advantage is taken of the circumstance. The cultivation is on the whole good, and in some villages as high as is to be found in any other parganah in the district. Transfers have taken place during the currency of the past settlement, affecting 29 per cent. of the total area. Of these 12,208 acres were by private sale, 2,843 acres by auction sale, and 3,531 acres by mortgage. Mr. Forbes is inclined to eliminate private sales from this account before drawing unfavourable conclusions, as this class of sales, at least in this parganah, are chiefly due to the great increase in the value of land. "In the large estate of Garhmuktesar the land is of very little value for agricultural purposes, yet the sanctity of the neighbourhood has given the ravines and sandy nálas about the town a fictitious value. Bankers, tradesmen, and men of all classes from all the country round are now eagerly buying up small plots, enclosing, levelling, sinking wells, planting gardens, and in some instances building small summer-houses in order to have a footing on such holy ground." The Tagas and Rajpúts, who are the largest proprietors, have also sold and bought most, whilst the Jàts sold only 633 acres and purchased 2,538 acres. There are 101 revenue-paying and nine revenue-free estates in the parganah. The Tagas hold 22 and have shares in 13 others; the Játs own 14 and have shares in 13 others; Rajpúts hold 11 whole estates and portions of 18, and the remainder are held by Afgháns, Gújars, Brahmans, Shaikhs, Sayyids and others.

Settlements.

The following statement shows the statistics of the past and present settlements :—

Period of settlement.	Total area.	Barren and revenue-free.	Cultivable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total.			
	Acres	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Re. a p.
Former, ...	58,390	9,068	19,739	3,823	25,760	29,583	49,322	48,096	1 10 0
Present, ...	67,322	10,526	12,529	10,919	33,348	44,267	56,796	58,880	1 5 3

Population.

According to the census of 1872, parganah Garhmuktesar contained 80 inhabited villages, of which 25 had less than 200 inhabitants; 27 had between 200 and 500; 19 had between 500 and 1,000; 6 had between 1,000 and 2,00; 2 had between 2,000

and 3,000. The only town containing more than 5,000 inhabitants is Garhmuk tesar itself, with 7,962 inhabitants. The total population in 1872 numbered 46,913 souls (21,949 females), giving 447 to the square mile. Classified according to religion there were 33,043 Hindus, of whom 15,326 were females; 13,870 Musalmáns, amongst whom 6,623 were females. Distributing the Hindu population amongst the four great classes, the census shows 3,538 Brahmans, of whom 1,679 were females; 1,718 Rajpúts, including 746 females; 1,717 Baniyas (787 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 26,070 souls, of whom 12,114 are females. The principal Brahman subdivisions found in this parganah are the Gaur (2,881), Sarasút (259), Bhat (57), Acháraj (79), Sanádh and Nagar. Rajpúts belong to the Chauhán (1,215), Tonwár, Panwár, Jádon and Dor (60) clans, and the Baniyas to the Agarwál (1,451) and Mahesri subdivisions. The other castes having more than one thousand members each are the Taga (1,807), Ját (2,907), Chamár (8,959), Bhangi (1,356), and Gújar (2,203). Those having less than one thousand members are the Máli, Jogi, Koli, Garariya, Kahár, Hajjám, Barhai, Sonár, Kumhár, Bharbhúnja, Dhúna, Gosháin, Ahír, Bairági, Káyath, Kalál, Lodha, Khatík, Fakír, Ghosi, Khagi, and Ahar. Musalmáns are distributed amongst Shaikhs (12,205), Patháns (309), Sayyids (76), and Mughals (33); the remainder are unspecified.

Occupations.

The census returns of 1872 give the occupations of the people also. They show that of the male adult population (not less than fifteen years of age), 555 were engaged in professional employments; 1,455 were employed in domestic service; 3,382 in commerce; 7,359 in cultivating the soil; 2,314 in the mechanical arts and manufactures, and 450 were returned as of no specified occupation. Taking the total population of the parganah, the same inquiry sets down 4,088 as landowners, 16,795 as cultivators, and 26,030 as pursuing occupations unconnected with agriculture. The educational statistics are imperfect, showing only 1,064 as able to read and write out of a male population numbering 24,964 souls. Up to 1819 Garhmuktesar was the head of a tahsíl which in that year was transferred to Hápur and included Hápur, Ajrára-Saráwa, Bhojpur, Jalálabad, and Garhmuktesar. There were 118 estates in 1852, reduced by transfers to 84 in 1853.

GHÁZIABAD or Gháziuddínnagar, a flourishing town in parganah Loni and tahsíl Gháziabad in the Meerut district, is situated in lat. 28° -39′-55″ north, and long. 77°-28′-10″ east, on the line of railway 28 miles from Meerut. In 1847 the population was 5,112; in 1853 there is no mention of Gháziabad amongst the towns having more than 5,000 inhabitants. In 1865 the numbers were 6,477, and in 1872 there were 7,365 inhabitants, of whom 4,762 were Hindus

(2,259 females) and 2,598 were Musalmáns (1,178 females) and 5 Christians. The town lies at a short distance from the left bank of the Hindan river, which is navigable from this place to the Jumna, a distance of 30 miles, for small boats and rafts. The site comprises portions of the villages of Játwara, Kaila, and Bhaunja. It at present comprises an oblong space about 1,000 yards long by 500 yards broad, bordered by brick walls and divided lengthwise from east to west by a main street, and in breadth from north to south by a second street. At the extremity of each of these ways is a gate-way. The first street is called the Purána Bazar, and is lined on each side by shops, some of which are two-storeyed; the second street is called the Náya Bazar, and both are broad, metalled, and drained. The shops are good, many are brick-built, and all are in good repair. The houses within this space and between the streets are closely packed together and divided by narrow, unmade lanes with some appearance of regularity. To the north-east is the brick-built sarái of the founder, Ghází-ud-dín. In 1872 the site had an area of 47 acres 2 roods 10 poles, giving 153 persons to the square acre, and owing to the growth of trade it is intended to enlarge the town. The walls to the south-west are to be thrown down, and bazars will be built on a space of 58 bíghas towards the Grand Trunk Road, as the requirements of the town may demand. Lines of trees have already been planted there, and this is the site of the new tahsíli and new school-house. To the east, the mud-built village of Játwara kalán contains the cultivators of the Ghásiabad lands, and here there is a fine tank with some good trees on its banks. At Kaila there is a second tank built by one Kámta Rám, Gosháin, about one hundred years ago; the *kothi* or hut of the builder is on the bank of the tank. A fair road leads to the great sarái from the Purána Bazar. The inner space of the sarái is capacious, and is surrounded by 120 masonry-built rooms adorned with pointed-arch fronts and affording good accommodation for travellers. The centre set of arches on each side are smaller and closer, and belong to separate places, set apart formerly for travellers of the better description. One of these buildings is now used as a police-station and another as a municipal hall. There is one mosque here and five others elsewhere in the town. There is one good temple called Mandir Dudheswarnáth. It is said that, some 200 years ago, a Brahman happened to pass by this spot and saw a cow dig a small hole in the earth and let her milk flow into it. On hearing the wonderful circumstance the Hindús built a temple over the spot and dedicated it to Dudheswarnáth. Before this the place was a jungle. The excavations near the brick-fields, the improvement of the butchers' quarter, and the repair of the wall and gates are all matters engaging the attention of the local authorities. The well water of the town is remarkably good, and water is found at a depth of from 40 to 50 feet from the surface. There is no canal irrigation near, still autumn fever

The site.

The saráis.

is prevalent. Though the principal inhabitants are Baniyas and Mahájans, there is no fixed market day. The tahsíl was removed here in 1859, and owing to the opening of the East Indian line and the Dehli and Panjáb line, the place is yearly rising in importance. The East Indian Railway station was built in 1865, and the Panjáb line was opened in 1869. Since then numerous railway barracks, bungalows, and houses for native employés have sprung up.

The municipality.

The affairs of the municipality are managed by a committee of nine members, of whom three are official, five are elected by the tax-payers, and one is nominated by the Railway Company. The income is derived from an octroi, which in 1874-75, fell at Re. 1-4-0 per head of the population. The following statement shows the income and expenditure for four years :—

Receipts.	1870-71.	1871-72.	1872-73.	1874-75.	Expenditure.	1870-71.	1871-72.	1872-73.	1874-75.
	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
Opening balance, ...	1,142	206	1,619	1,976	Collection, ...	1,059	1,227	1,238	670
Class I.—Food & drink,	5,361	5,684	3,317	1,502	Head-office, ...	433	310	186	60
„ II.—Animals for slaughter.	70	356	701	547	Original works,	296	101	2,686	2,533
„ III.—Fuel, &c., ...	60	193	640	659	Purchase of land.	2,073	152	...	...
„ IV.—Building materials.	100	280	222	216	Repairs, &c., ...	57	607	116	1,000
„ V.—Drugs, spices, &c.	90	105	100	98	Police, ...	2,203	2,398	1,787	1,724
„ VI.—Tobacco, ...	42	68	58	38	Education, ...	...	...	...	122
„ VII.—Textile fabrics.	...	...	714	395	Conservancy, ...	506	476	553	840
„ VIII.—Metals, ...	...	...	24	28	Charitable grants,	340	195	292	70
Total of octroi, ...	5,723	6,686	5,776	3,483	Watering roads,	448	424	384	288
Rents, ...	681	597	188	37	Gardens, ...	276	22	14	15
Tolls on carts, ...	...	...	1,338	2,185	Miscellaneous, ...	262	167	190	140
Extraordinary, ...	100	24	85	...	Lighting, ...	...	118	284	395
Fines, ...	21	23	...	10					
Pounds, ...	176	227	218	136					
Miscellaneous, ...	316	56	386	295					
Total, ...	8,159	7,816	9,610	8,122	Total, ...	7,953	6,197	7,730	7,857

The following statement shows the character and value of the imports and the consumption per head of the population :—

Articles.	Value imported in 1871-72.	Imports in 1872-73.		Consumption per head in		Articles.	Value imported in 1871-72.	Imports in 1873-74.		Consumption per head in	
		Value.	Quantity.	1871-72.	1872-73.			Value.	Quantity.	1871-72.	1872-73.
	Rs.	Rs.	Mds.	Rs. a p.	Rs. a. p		Rs.	Rs.	Mds.	Rs. a p.	Rs a. p.
Grain, ...	2,20,330	90,609	60,400	22 0 8	8 11 1	*Pán* (bundles)	519	395	790	...	...
Sugar, ...	43,885	58,209	14,574	4 6 3	5 9 3	Milk, ...	1,531	1,141	571	...	...
Ghi, ...	16,912	15,537	615	1 11 1	1 8 0	Metals, ...	...	1,658	...	...	0 2 6
Vegetables	2,640	2,721	2,721	...	...	Buildi n g materials.	9,944	874	...	...	...
Fodder, ...	3,995	1,327	1,327	...	...	Spices, &c ,	6,716	6,367	...	...	...
Oil and oil-seeds.	29,950	27,279	8,029	2 12 8	2 3 9	Tobacco,...	2,167	374	...	0 3 5	...
Fruit, ...	2,422	1,016	1,525	...	...	Cloth, ...	...	47,788	...	...	4 9 2

The consumption of grain in weight during 1872-73 amounted to 5 maunds 33 sers 1 chhaták per head. A toll on carts laden with grain has now been substituted for the duty on grain itself. Since the opening of the municipality many local improvements have been effected, but much still remains to be accomplished. The streets have been widened, metalled and drained, conservancy has been placed on a stable footing, and educational institutions have been established in connexion with the municipality. The following statement shows the selling price of wheat at Ghaziabad from 1831 to 1870 :—

Year.	Sers.	Year.	Sers.	Year.	Sers.	Year.	Sers.
1831, ...	36	1841, ...	27	1851, ...	42	1861, ...	14
1832, ...	36	1842, ...	28	1852, ...	32	1862, ...	27
1833, ...	20	1843, ...	34	1853, ...	27	1863, ...	32
1834, ...	32	1844, ...	33	1854, ...	35	1864, ...	25
1835, ...	40	1845, ...	36	1855, ...	47	1865, ...	19
1836, ...	42	1846, ...	31	1856, ...	38	1866, ...	20
1837, ...	18	1847, ...	33	1857, ...	37	1867, ...	21
1838, ...	12	1848, ...	21	1858, ...	30	1868, ...	23
1839, ...	20	1849, ...	35	1859, ...	32	1869, ...	13
1840, ...	21	1850, ...	44	1860, ...	17	1870, ...	15

History.

Ghaziabad was founded in 1740 by the Vazír Ghází-ud-dín, son of Asaf Jáh and brother of Salábat Jang, ruler of the Dakhin, some account of whom is given in the introduction. It

was known as Ghāziuddínnagar until the opening of the railway, when the name was shortened to Ghāziabad. It was here that, in May 1857, the small British force from Meerut successfully encountered the Dehli rebels who had come out to oppose them. Ghāziabad lies on the Grand Trunk Road between Aligarh and Dehli, distant 11 miles from Dádri and 14¼ miles from Dehli. The road in both directions is metalled and bridged. From Dádri, in the Gújar country, the road passes by Dhúm, 2 miles; Badalpur Milk, 4 miles; Chhapraula, 6 miles. From Ghāziabad to Dehli, the Hindan is crossed by a bridge at 1½ miles, Shahdara is passed at 8½ miles, and the Jumna is crossed by the railway bridge at 10½ miles. The Grand Trunk Road enters Dehli by the Calcutta gate, passes down the Chándni Chauk, and leaves it by the Láhor gate for the Panjab.

GHĀZIABAD, a tahsíl of the Meerut district, comprises the parganahs of Dásna, Jalálabad, and Loni in the south-west of the district. According to the census of 1872 the total area then comprised 494 square miles and 252 acres, of which 353 square miles and 225 acres were cultivated. The area assessed to Government revenue contained 480 square miles and 376 acres, of which 347 square miles and 285 acres were cultivated, 79 square miles and 323 acres were culturable, and 53 square miles and 408 acres were barren. The land-revenue during the same year amounted to Rs. 3,95,326 (or with cesses Rs. 4,30,896), falling at the rate of Re. 1-4-0 on the total area per acre, Re. 1-4-7 on the area assessed to Government revenue, and Re. 1-12-0 on the cultivated acre. The population during the same year numbered 253,037 souls, of whom 116,243 were females. There were 512 souls to each square mile, living in 356 villages. The same statistics show 15 persons as insane, 17 as idiots, 34 as deaf and dumb, 650 blind, and 74 lepers. All other subjects are noticed in the account of the district or separately under each parganah.

GOHRA or Gaura, also known as Gauha, a village in parganah Hápur and tahsíl of the same name in the Meerut district, is distant about 15 miles from Meerut. In 1865 the population was 1,426, and in 1872 was 1,753. It was once the head of a tappa and a place of considerable importance. Tradition says that the cattle of the Hastinápur Rajas were housed here. Near Gohra a khera or mound is said to mark the site of an ancient village, Bijayapur, under which name it is known to this day.

HÁPUR, a large town in the parganah of the same name in the Meerut district, is distant 18 miles from Meerut to the south. The population in 1865 numbered 14,294, making it the second city in the district. In 1872 the number was 14,544, of whom 8,696 were Hindus (4,036 females) and 5,848 were Musalmáns (2,907 females), including one Christian. There are 1,903 enclosures in the town, of which 1,147 are occupied by Hindus. The

enclosures contain 3,390 houses, of which 665, built by skilled labour, and 1,402 mud huts are occupied by Hindus, and 190 masonry dwellings and 1,133 mud huts by Musalmáns. There are 34 muhallas in the town. Dividing the population according to their callings, we have 298 registered as landowners, 1,053 as cultivators, and 13,192 as following occupations unconnected with agriculture. 669 Hindu males, 239 Musalmán males, and four Hindu females out of the whole population are shown as able to read and write. Taking the male population not less than fifteen years of age (3,157 Hindus and 1,869 Musalmáns), the occupation of those numbering more than forty members are as follows:—Barbers (100), beggars (109), brick-layers (47), butchers (135), carpenters (78), cartmen (161), confectioners (40), cultivators (420), goldsmiths (46), grain-dealers (62), green-grocers (93), grocers (40), labourers (854), landowners (111), cloth-sellers (90), money-lenders (91), oil-makers (51), pandits (55), purohits (43), servants (738), shop-keepers (548), shoemakers (77), sweepers (76), tailors (40), water-carriers (56), and weavers (145).

Population.

Hápur is situated in the angle formed by the Bulandshahr and Meerut high road coming from the south, and the Dehli and Garhmuktesar running from east to west. The elevation of the stone bench-mark imbedded at the encamping-ground on the south-west side of the Meerut road is 692·94 feet above the level of the sea. Between the roads and the town are several fine groves and some cultivated land, so that the town itself is hardly visible from either road. There are five gates—the Dehli, Meerut, Garhmuktesar, Kothi and Sikandra, or rather the names have survived, for little remains of either the gates or of the wall and ditch that once surrounded the town, now exist. Towards the Jamah Masjid or principal mosque, in the centre of the town, the site is somewhat high, but, as a rule, it is level, and in places even lower than the surrounding fields. To the north the drainage finds its way to a large irregular excavation close to the Dehli road, and on the south-east there is a large reservoir connected with the Chhoiya Nála which carries off the superfluous moisture from three-fourths of the town. About the town, on all sides, are numerous small excavations often full of stagnant water. The principal bazar, known as the Purána Bazar, runs from the Meerut to the Dehli gate. To the west of this are the Purána and Náya Mandís or markets and Mahádeoganj, all large business-places running parallel to each other, and bounded on the north by the Khubári Bazar, and on the south by the Bazáz and Halwái Bazars, which run out west from the Purána Bazar. All these bazars are lined with shops and form a compact business quarter. The Musalmáns reside chiefly to the east, and here the character of the town is that of a large agricultural village full of cattle and the appliances of husbandry. To the west the streets are mostly metalled and

The site.

drained by saucer drains made by bricks, and the houses are good, but to the east and throughout the suburbs, apart from the principal roads, the roads are mere broken waterways uneven and unmade. The water is found in wells at a depth of 30 feet from the surface, and is good. There is no canal irrigation within four miles, and though fever occurs during the rains, the general health of the people is good.

The tahsíli and police-station are situated outside the town on the Bulandshahr road, and are accommodated in a large brick-built structure inclosing a court-yard, well shaded with trees. The school is within the town in the Khubári Bazar and English is taught to an average of 49 pupils. The dispensary is in the centre of the town in a good building purchased for the purpose, and has a daily attendance of about 30 patients. There are three saráis on the Meerut road and two others elsewhere, beside an encamping-ground for troops. There are 28 mosques and 25 temples in the town, and several schools where the Korán is taught to about 60 boys. The Chaukidári Act was in force in Hápur for many years, but since March, 1872, the Municipal Act has been introduced.

Municipality.

There is a large market here every Monday, and a considerable trade in sacharine produce, grain, cotton, timber, bambus and brass utensils is carried on. The affairs of the municipality are managed by a committee comprising three official members and six members elected by the tax-payers. The income is obtained from an octroi tax, which in 1874-75 fell at Re. 1-0-3 per head of the population. The following statement shows the income and expenditure for four months of 1872-73 and for the entire years 1873-74 and 1874-75 :—

Receipts.	1872-73.	1873-74	1874-75.	Expenditure.	1872-73.	1873-74	1874-75.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Opening balance,... ...	881	3,013	613	Collection, ...	651	1,616	1,492
Class I.—Food and drink, ...	3,249	6,943	7,170	Head-office, ...	49	60	60
,, II.—Animals for slaughter,	48	257	360	Original works, ...	600	5,588	4,837
,, III.—Fuel, &c. ...	269	630	556	Supervision, ...	30	120	120
,, IV.—Building materials,	414	652	546	Repairs, &c. ...	...	655	664
,, V.—Drugs, spices, &c. ...	186	428	417	Police, ...	1,074	3,427	2,940
,, VI.—Tobacco, ...	30	108	118	Lighting, ...	36	419	600
,, VII.—Textile fabrics, ...	231	1,134	1,226	Education, ...	...	240	233
,, VIII.—Metals, ...	343	975	984	Conservancy, ...	252	1,224	1,289
Total of octroi, ...	4,770	11,127	11,347	Charitable grants, ...	...	492	600
Rents, ...	100	215	184	Miscellaneous, ...	93	130	249
Fines, ...	37	195	120				
Pounds, ...	10	152	...				
Miscellaneous, ...	...	82	2,464				
Total, ...	5,798	1434	14,728	Total, ...	2,785	14,171	13,084

The character of the imposts will be seen from the following table showing the imposts of 1873-74 :—

Statement showing imports of taxable articles for two years in Hápur Municipality.

Articles.	Net imports in				Consumption per head in			
	1873-74.		1874-75.		1873-74.		1874-75.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Mds.	Rs.	Mds.	Rs.	Mds. s. c.	Rs. a p.	Mds. s. c.	Rs. a. p.
Grain, ...	108,841	...	110,720	...	7 19 11	...	7 32 1	...
Sugar refined, ...	4,167	...	5,283	...	0 0 0¾	...	0 14 8	...
„ unrefined, ...	20,618	...	17,016	...	1 28 2	...	1 5 15	...
Ghi, ..	1,168	...	1,063	...	0 3 3	...	0 3 0	...
Other articles of food,	10,978	1,728	14,757	1,348	Besides head loads and bundles.			
Animals for slaughter,	1,810No.	...	3,138No.	...	½ a head	...	½ a head	...
Oil and oil-seeds, ...	5,595	...	5,650	...	0 15 6	...	0 17 0	...
Fuel, &c., ...	13,9:3	...	10,083 loads.	...	...	...	...	..
Building materials, ...	...	30,339	...	23,922	...	2 1 6	...	1 10 4
Drugs and spices, ...	...	20,958	...	20,442	...	1 7 1	...	1 6 6
Tobacco, ...	1,301	...	1,365	...	0 3 9	...	0 3 12	...
European, and native cloth.	...	73,652	...	76,478	...	5 1 0	...	5 4 1
Native shoes, ..	...	1,781	...	1,473	...	0 2 0	...	0 1 9
Metals, ...	2,784	1,6 9	2,7:6	1,081	0 7 10	0 1 9	0 7 7	0 1 2

Hápur is as well drained a town as any in these Provinces ; its roads are in admirable order and its conservancy very good indeed.

History.

Hápur is said to have been founded by Hardat, a Dor chieftain, about 983 A.D., and called after him Haripur. Others say that Ghaias-ud-dín Tughlak on visiting the place found the people going about naked and called it Hayapur, or town of shame, and hence the name Hápur; but the most probable derivation is from *Hápur*, which signifies 'an orchard' or grove, such as abound in the town. In confirmation of this suggestion it may be mentioned that the people do not pronounce the name of the place as Hápúr, but Hápar, though it is always written Hápur. Perron established here a vast system of *jágírs* or grants for the disabled or worn-out veterans of his army, which was adopted by the British for many years. In the Meerut records are numerous papers giving details of contracts for clearing waste lands of jungle for the benefit of invalids admitted as jágírdárs. In March, 1805, Ibráhím Ali, tahsíldar of Hápur, defended the station against Amír Khán and 500 Pindáras. In the mutiny Hápur was threatened by the forces of Walidád Khán of Málágarh, who were obliged to retire by the loyal Játs of Bhatona. At the village of Jasrúpnagar Ashurpur there is a celebrated *bauli* or masonry well constructed of Agra sandstone, some 500 years ago, by one Ashur Khán, a commander in the army of Ghaias-ud-dín.

HÁPUR, a parganah in the tahsíl of the same name in the Meerut district, is bounded on the north by Saráwa, on the east by Garhmuktesar, on the west by Dásna, and on the south by the Bulandshahr district. According to the census of 1872 the total area then amounted to 162 square miles and 441 acres, of which 121 square miles and 404 acres were cultivated. The area assessed to Government revenue was 153 square miles and 165 acres, of which 114 square miles and 98 acres were cultivated, 18 square miles and 585 acres were culturable, and 20 square miles and 122 acres were returned as unculturable.

Physical characteristics.

Though all the nálás and drainage channels of the Hindan-Ganges duáb, after traversing the whole length of the parganah, unite together at the south, the general level as shown by the Great Trigonometrical Survey statistics, given under the district notice, proves that the fall in level is gradual throughout. Owing in a great measure, however, to this fact, the soils are poorer in quality, a large portion of the area being sandy *bhúr* of little value and entirely dependant upon the rains. In estates at a distance from the drainage channels the soils are excellent, so that in this parganah we have some of the highest and the lowest rents in the entire district. The area at the past and present settlements has been given under the district notice. It is only necessary to notice here that the drainage channels referred to above cut off irrigation by canals; well-irrigation is attainable, however, at a small cost, and with water near the surface. In time of drought this parganah would be one of the first to suffer as containing the maximum of estates dependant upon rainfall. It would therefore be well to meet the desire of the landholders to construct wells more than half way, as recommended by Mr. Forbes. Judicious grants of *takkávi* for this purpose would go far towards removing all fear of great distress in seasons of drought. At the recent settlement about one-half the total cultivated area (79,038 acres) was irrigated, of which only 3,838 acres were watered by canals, while 35,513 acres drew their water-supply from wells and 1,028 acres from tanks.

Transfers.

The transfers during the currency of the past settlement amounted to nearly one-fifth of the area assessed to Government revenue; of these 5,740 acres passed from the hands of the old proprietors by forced sale, 4,596 acres were temporarily transferred by mortgage, and 11,833 acres by private sale. Mr. Forbes writes:—"The Játs have bought up much land and parted with little, and I regret to find that the money-lenders have come largely into the market. The Tagas have lost some of their lands, selling 2,000 acres more than they have purchased." The balances in this parganah have been heavy compared with other tracts, and were principally due to the dearth of 1860-61, and for the reasons above given, "this parganah will need to be instantly looked after in seasons of drought, but

with proper precautionary measures for employment there need only be a postponement of the demand." Rent-rates and other matters relating to the economical history of the parganah have been sufficiently noticed in the account of the district. Altogether, owing to the predominance of the Játs in both the landowning and cultivating classes, the very most is done which industry can effect in a poor soil, and Hápur must continue one of the worst parganahs in the district.

The following statement compares the statistics of the former and present settlements :—

Period of settlement.	Total area.	Barren and revenue-free.	Cultivable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...	99,077	12,283	21,559	19,261	45,974	65,235	86,794	1,20,579	1 13 6
Present, ...	1,04,121	13,750	12,548	39,878	37,945	77,823	90,371	1,33,900	1 11 6

Population.

According to the census of 1872 parganah Hápur contained 133 inhabited villages, of which 23 had less than 200 inhabitants; 46 had between 200 and 500; 45 had between 500 and 1,000; 14 had between 1,000 and 2,000; 3 had between 2,000 and 3,000; and one had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Hápur itself, with 14,544 inhabitants. The total population in 1872 numbered 96,776 souls (45,430 females), giving 594 to the square mile. Classified according to religion there were 75,481 Hindus, of whom 35,276 were females; 21,268 Musalmáns, amongst whom 10,145 were females; and 27 Christians. Distributing the Hindu population amongst the four great classes, the census shows 9,403 Brahmans, of whom 4,470 were females; 4,372 Rajpúts, including 1,985 females; 5,317 Baniyas (2,468 females), whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 56,389 souls, of whom 26,353 are females. The principal Brahman subdivisions found in this parganah are the Gaur (7,896), Saraúst (750), Bhát (174), Dakaut (167), Acháraj (54), Bohra, Dasa, and Pachháda. The Rajpúts belong to the Tonwár (2,093), Chauhán (162), Badgújar, Gahlot and Rána clans, and the Baniyas to the Agarwál (4,720), Saraugi (38), Bishni (169), and Mahesri subdivisions. The other castes having more than one thousand members each are the Taga (3,762), Máli (1,714), Koli (2,675), Garariya (1,449), Kahár (1,770), Haj-

jám (1,566), Ját (9,761), Kumhár (1,810), Chamár (17,736), Bhangi (3,092), and Gújar (3,976). Those having less than one thousand members are the Jogi, Barhai, Sonár, Bharbhúnja, Dhúna, Juláha, Gosháin, Ahír, Bairági, Khattri, Káyath, Chhípi, Kalál, Dhobi, Lodha, Nat, Khatík, Teli, Saisi, Dhanak, Kanjar, Baheliya, Gadhaila, Ghosi, Fakír, and Ráj. Musalmáns are distributed amongst Shaikhs (16,981), Patháns (864), Sayyids (754), and Mughals (50). The remainder are entered in the census records without distinction of race.

Occupations.

The occupations of the people during the same year showed that among the male adult population, 757 persons were engaged in professional employments; 2,123 were employed in commerce; 12,903 in agriculture; 4,192 in domestic service; 5,502 in manufactures and the mechanical arts; 5,221 were returned as labourers, and 876 had no specified occupation. Taking the whole population, the same inquiry set down 10,863 as landholders, 27,363 as cultivators, and 58,550 persons as engaged in avocations unconnected with the cultivation of the soil. The educational statistics are too untrustworthy for record, giving only 2,549 as able to read and write out of a male population numbering 51,346 souls. Hápur contained the tappas of Gohra or Gaura, Hájipur, and Hápur. In 1809 it was attached to the Meerut tahsíl. In 1819, Hápur, Ajrára, Saráwa, Garhmuktesar, Bhojpur, and Jalálabad formed a tahsíl. There were 86 estates, with an area of 67,616 acres, in Hápur in 1852, and these were increased by transfers to 144 estates, comprising 105,432 acres in 1853.

HÁPUR, a tahsíl in the Meerut district, comprises the parganahs of Hápur, Saráwa, Garhmuktesar, and Púth, each of which is separately noticed. The area in 1872 comprised 408 square miles and 484 acres, of which 284 square miles and 541 acres were cultivated. The area assessed to Government revenue amounted to 389 square miles and 275 acres, of which 269 square miles and 164 acres were cultivated, 63 square miles and 539 acres were culturable, and 56 square miles and 212 acres were barren. The land-revenue during the same year amounted to Rs. 2,94,125 (or with cesses Rs. 3,25,347), falling on the total area at Re. 1-2-0 per acre, on the area assessed to Government revenue at Re. 1-2-11, and on the cultivated acre at Re. 1-9-10. The population numbered 205,140 souls (96,663 females), giving 501 to the square mile, and distributed amongst 308 villages. The same statistics show 18 persons as insane, 6 idiots, 26 deaf and dumb, 657 blind, and 73 lepers. All other subjects are noticed either under the district itself or separately under each parganah.

HASTINÁPUR, an old town in the parganah of the same name in the Meerut district, lies 22 miles to the north-east of Meerut. The population in 1872 was only 77. It is said to mark the portion of the site of the ancient Pándava city, of which some account has been given in the introduction.

HASTINÁPUR, a parganah in tahsíl Mawána of the Meerut district, is bounded on the north by the Muzaffarnagar district, on the east by the Ganges, on the south by Kithor, and on the west by parganah Meerut. According to the census of 1872 the total area then comprised 241 square miles and 346 acres, of which 125 square miles and 530 acres were cultivated. The area assessed to Government revenue amounted to 241 square miles and 229 acres, of which 125 square miles and 468 acres were cultivated, 80 square miles and 336 acres were culturable, and the remainder was barren.

Condition of the parganah.

The best villages in the parganah lie between Phitkari on the north and Nagauri on the south. These contain good soils with water close to the surface and good capability for well-sinking. Further east by Mahmúdpur and Babsúma the water-level sinks and the soil is mixed, while there is no capability for well digging, but to a certain extent canal water is available. In the south and south-east of the parganah the soils are still coarse and there is no irrigation. For the lands of the first tract, a rent-rate of Rs. 6 an acre was assumed at the recent settlement; for the good portion of the second tract when irrigated Rs. 4-12-8 per acre, and unirrigated Rs. 3-9-6 per acre, and for the inferior parts Rs. 2 per acre. In the third tract, in some parts, the rate has fallen as low as Re. 1-8-0, or five annas per kuchcha bígha, the rate prevailing in *chorh* or high sandy land. Cultivation has increased from 60,704 acres to 75,792 acres in Hastinápur, or 25 per cent., during the currency of the past settlement.

Irrigation.

Irrigation has increased from 8,795 acres to 28,981 acres, or 33·0 per cent., and in the proportion to the total cultivated area has risen from 14 to 38 per cent. This is chiefly due to the opening of the Anúpshahr branch of the Ganges Canal, which has, in a great measure, supplied villages formerly destitute of the means of irrigation. The general history of the past and present settlements has been sufficiently indicated under the district notice. It is merely necessary to notice that the land-revenue has risen from Rs. 1,06,549 to Rs. 1,40,425, giving an increase of Rs. 33,876, or 32 per cent., in the upland villages alone. In both classes the revenue has increased from Re. 1,14,462 to Re. 1,48,780, and the rate per acre on the cultivation from Rs. 1-14-2 to Re. 1-15-4. The following statement shows these statistics in detail:—

Period of settlement.	Total area.	Barren and revenue-free.	Culturable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...	108,961	14,469	33,788	8,795	51,909	60,704	94,492	1,14,462	1 14 2
Present { Khádir,	52,779	7,163	42,520	39	3,057	73,096	45,616	1,48,780	1 14 5
Present { Bángar,	101,371	15,485	10,922	28,969	45,995	4,964	85,886		

Population.

According to the census of 1872 parganah Hastinápur contained 139 inhabited villages, of which 50 had less than 200 inhabitants; 38 had between 200 and 500; 32 had between 500 and 1,000; 14 had between 1,000 and 2,000; one had between 2,000 and 3,000; and 3 had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Mawána, with 6,714 inhabitants. The total population in 1872 numbered 75,344 souls (34,612 females), giving 311 to the square mile. Classified according to religion there were 59,982 Hindus, of whom 27,349 were females; 15,362 Musalmáns, amongst whom 7,263 were females. Distributing the Hindu population amongst the four great classes, the census shows 4,401 Brahmans, of whom 2,002 were females; 2,747 Rajpúts, including 1,251 females; 3,725 Baniyas (1,709 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 49,109 souls, of whom 22,387 are females. The principal Brahman subdivisions found in this parganah are the Gaur (3,949), Bhát (81), Sarasút, Dakaut, and Acháraj. The Rajpúts belong to the Chauhán (2,604) and Tonwár clans, and the Baniyas to the Agarwál (1,122), Saraugi (17), Gadariya, Bishni, Bishnoi, Raja-ki-barádari, Rastaugi, and Mahesri subdivisions. The other castes exceeding in number one thousand souls each are the Máli (1,128), Garariya (1,005,) Kahár (1,931), Ját (6,996), Kumhár (1,454), Chamár (16,721), Bhangi (2,262), and Gújar (8,925). The following have less than one thousand members each:—Taga, Jogi, Hajjám, Barhai, Sonár, Bharbhúnja, Dhúna, Juláha, Gosháin, Ahír, Káyath, Chhípi, Kalál, Khatík, Saisi, Fakír, Saini, Kamboh, Patwa, Sapera, Baheliya, and Banjára. Musalmáns are distributed amongst Shaikhs (12,781), Patháns (1,133), Sayyids (1,116), and Mughals (61): the remainder are unspecified.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 362 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 2,551 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 868 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 12,154 in agricultural operations; 4,267 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 4,291 persons returned as labourers and 566 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 7,567 as landholders, 27,319 as cultivators, and 40,458 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,306 males as able to read and write out of a total male population numbering 40,732 souls. In

1852 there were two parganahs: Niloha with 128 estates and 104,493 acres, and Tárapur with 49 estates and 58,245 acres; these were amalgamated under the name Hastinápur in 1853, which was fixed to comprise 166 estates and 150,950 acres.

INCHAULI, a large village in parganah Meerut, is distant seven miles and seven furlongs from Meerut. The population in 1872 was 2,187. There is a police-station here.

JAGAULI, a small village of 52 inhabitants in parganah Loni, is distant 27⅞ miles from Meerut. There is an outpost of police here.

JALÁLABAD, a parganah in tahsíl Gháziabad of the Meerut district, is bounded on the north by Meerut, on the east by Saráwa and Hápur, on the west by Bágpat and Loni, and on the south by Dásna. According to the census of 1872 the total area then contained 201 square miles and 123 acres, of which 145 square miles and 514 acres were cultivated. The area assessed to Government revenue showed 198 square miles and 491 acres, of which 144 square miles and 29 acres were cultivated. Of the remainder 26 square miles and 216 acres were returned as unculturable.

Condition of the parganah.

The Hindan forms the western boundary of the parganah, which is traversed throughout its entire length by the Dehli and Meerut Grand Trunk Road and the Ganges Canal. The villages to the east of the Dehli road are inferior to those lying to the west. Some of the estates to the south-east bordering on Dásna are as rich as any in the parganah, and again, as a rule, those lying immediately on the Hindan are the poorest. The Ganges Canal passes through the most fertile tract in the parganah, and this will account for the small increase (8,795 acres) in cultivation since last settlement. Irrigation has increased from 26,156 acres to 66,030 acres. About half the irrigated area is watered from wells, whilst extensive areas of land have their fine well capability destroyed and supplanted by the canal. The general history connected with the past and present settlements of this parganah and other matters pertaining to its economical history are sufficiently indicated in the district notice. One remarkable fact is shown by the recent inquiries, and this is, that at the former settlement the rich western villages were assessed at only Re. 1 per acre, whilst many of the poor villages on the east paid Rs. 2. At the present settlement the former have been enhanced and the latter relieved to a certain extent of their unequal burdens. It may be as well to note here that the increase in the barren area is principally due to land having been taken up for the Ganges Canal and its distributaries. Twenty-three per cent. of the total area has changed hands during the currency of the past settlement; of this 15,764 acres were by private sale, 6,472 acres by forced sale, and 5,173 acres by mortgage. The largest landholders, as well as sellers and buyers, were Tagas and Játs. Játs hold 41 entire estates besides chief shares in 15 others, and

Hindu Tagas hold 40 estates and shares in 23 others. These Tagas rebelled in 1857 and committed murder in several instances, so that seven of their villages were confiscated, making a considerable difference in the transfer returns. Tagas and Játs prevaila mongst the cultivators, and the former and the Rajpúts seem to have benefited by the example of the industrious Játs around them. The chief products grown bear the following proportion to the total cultivated area:—*Kharíf*, sugarcane, 7 per cent.; cotton, 10; maize, 6; *chari* for fodder, 7; and *joár*, 18 per cent. In the *rabí* harvest wheat shows 24 per cent.; gram, 6; barley, 3; and wheat and gram mixed, 12 per cent.

The following statement compares the statistics of the past and present settlement:—

Period of settlement.	Total area.	Barren and revenue-free.	Cultivable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...	126,626	17,884	25,348	26,156	57,238	83,394	108.742	1,43,580	1 11 6
Present, Khádir,	5,523	879	1,254	782	2,608	3,390	4,644	1,75,055	1 14 4
Present, Bángar,	123,240	17,529	16,912	65,748	23,051	88,799	105,711		

Population.

According to the census of 1872 parganah Jalálabad contained 134 inhabited villages, of which 21 had less than 200 inhabitants; 46 had between 200 and 500; 30 had between 500 and 1,000; 28 had between 1,000 and 2,000; 4 had between 2,000 and 3,000; and 5 had between 3,000 and 5,000. The total population in 1872 numbered 105,559 souls (48,392 females), giving 525 to the square mile. Classified according to religion there were 86,197 Hindús, of whom 39,186 were females; 19,362 Musalmáns, amongst whom 9,206 were females. Distributing the Hindu population amongst the four great classes, the census shows 10,737 Brahmans, of whom 4,880 were females; 1,569 Rajpúts, including 660 females; 4,432 Baniyas (2,035 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 69,459 souls, of whom 31,611 are females. The principal Brahman subdivisions found in this parganah are the Gaur (9,734), Sarasút (88), Bhát, Dakaut (115), Acháraj (172), Bohra, Chaurasya and Gautam. The Rajpúts belong to the Tonwár (1,040), Chauhán (257), Thákuriya and Hanumán clans, and the Baniyas to the Agarwál (3,781), Saraugi (268,) Gadariya (163), and Mahesri subdivisions. The other castes numbering more than one thousand members each are the Taga (10,485), Máli (1,668), Kahár (2,528), Hajjám (2,113), Barhai (1,135), Ját (14,299), Kumhár (1,870),

Chamár (15,573), Bhangi (4,916), Juláha (1,516), Gújar (3,387), and Ahír (2,018). Those having less than one thousand members are the Jogi, Koli, Garariya, Sonár, Lohár, Bharbhúnja, Dhúna, Gosháin, Bairágí, Khattri, Káyath, Chhípi, Kalál, Dhobi, Nat, Lodha, Khatík, Rahti, Baheliya, Orh, and Sádh. The Musalmáns are distributed amongst Shaikhs (9,030), Sayyids (402), Mughals (334), and Patháns (1,309): the remainder are unspecified.

Occupations.

The census statistics show that of the male adult population 710 were engaged in professions; 3,985 in domestic service; 2,002 in commerce; 17,758 in cultivating the soil; 4,788 in the mechanical arts and manufactures, whilst 5,767 were returned as labourers and 1,017 of no specified occupation. Of the total population 23,083 are shown as landholders, 25,854 as cultivators, and 56,622 as pursuing callings unconnected with agriculture. The educational statistics give only 1,632 males out of a total male population numbering 57,167 souls as able to read and write. In the reign of Akbar Jalálabad was included in sirkár Dehli. In 1809 Jalálabad was included in the tahsíl comprising parganahs Ajrára, Saráwa, Bhojpur, and Jalálabad; the total land-revenue of this tahsíl was but Rs. 94,527 The present revenue of this parganah alone is Rs. 1,76,718. At Sultánpur, in this parganah, there is a fine temple built by Játs, called *Shámji-ka-mandir*. At Rauli there is a fine *shiwála* and at Síkrí khúrd a temple of Kalka Devi, at which a religious fair is held in Chait and Asárh. Aríspur possesses a fine tank, and Makímpur has the ruins of a small fortress built by Guláb Singh, Rajpút. This fort was demolished by the British in 1861. Bhojpur, formerly the head-quarters of a *tappa* and subsequently of a parganah, contains a few remains of interest.

JALÁLABAD, the chief village of the parganah of the same name, is distant 17¼ miles from Meerut. The population in 1872 was 3,087. It is a purely agricultural village of no note whatever.

JÁNI KALÁN, a village in parganah Meerut of the Meerut district, is situated close to the main branch of the Ganges canal at a distance of nine miles from Meerut. The population in 1872 was 1,059. It has a first-class police-station. One mile to the east is the village of Jáni khurd, with a population in 1872 numbering 1,439 souls.

KAHWÁI, a village in parganah Sardhana of the Meerut district, situated on the Hindan *bángar* about 16 miles from Meerut. In 1865 the population was 2,502, and in 1872 was 2,707, mostly Hindu and Musalmán Rajpúts. The place is very old, and was made the head-quarters of a tahsíl establishment by the Begam, Bála Bái, of Gwalior.

KAILI, a small village in parganah Saráwa of the Meerut district, is distant 15 miles from Meerut. The population in 1872 was 1,366. There is an out-post of police here.

KANKAR KHERA, a village in parganah Meerut, is distant a little over two miles from Meerut. The population in 1872 numbered 1,148 souls, occupying 285 houses. It is united with the villages of Kasera, Bagsar, and Khera Bagsar for the purposes of the Chaukidári Act. In 1873 the Act supported a village police numbering 26 men of all grades at an annual cost of Rs. 1,848. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 2,307, falling at Re. 0-10-5 per head of the population and Re. 1-8-11 per house assessed (1,479). The expenditure during the same year was Rs. 2,744, which was met from the income and a balance of Rs. 453 from the previous year.

KARNÁWAL is a large Ját village situated in parganah Sardhana of the Meerut district, 15 miles from Meerut. In 1865 the population was 4,264, and in 1872 was 3,985. The Játs are said to have appropriated Karnáwal 200 years ago. At first a new village was erected by the Játs, but in course of time they got possession of the old village and abandoned the new one. This is now the khera. At a little distance from the present site are the remains of a very large village which is said to have been wrested by the invading Musalmáns from the Rajpúts and then burnt down.

KASIMPUR or Nagla Káshi, a village in parganah Meerut, is distant 4·6 miles from Meerut. It has a police-station and a population numbering 598 in 1872.

KHARKODA or KHARA KHONDA, a town in the Meerut district in parganah Saráwa and tahsíl Hápur, is distant from Meerut nine miles. The population in 1865 was 3,433, and in 1872 was 3,517. The town is very ancient, and is said to have contained the horse and elephant stables of the Hastinápur Rajas : hence the name Khara Khonda or Kharkoda. The town began to flourish in Humáyún's time, and the opening of the trunk road to Calcutta through it has accelerated its progress. The principal inhabitants are Hindu Tagas. There is a first-class police-station and a district post-office here. The elevation of the stone bench-mark of the Great Trigonometrical Survey in the south-east corner of the encamping-ground near the *bardásht-khana* is 713·51 feet above the level of the sea.

KHEKARA, Khekora or Kahkra, a town in parganah and tahsíl Bágpat of the Meerut district, is distant 26 miles from Meerut. The population in 1853 was 5,823, and in 1865 was 6,045. It is said to have been founded 1,500 years ago, and 1,000 years since the Játs emigrated from Sikandarpur and ousted the Ahírs of Khekara from all save one *patti*, appropriating the land themselves. During the mutiny one *patti*, Chakarsainpur-Raghunáthpur, rebelled and was confiscated. Subsequently it was given over to the zamíndárs of the patti Khekara khás, who, on account of their loyalty, pay for their lives but three-fourths of the Government revenue assessment. There is a fine Jain temple here, also a second-class police-station.

KIRTHAL, a large Ját village in parganah Chhaprauli and tahsíl Bágpat of the Meerut district, is distant 24 miles from Meerut. In 1865 the population was 5,568, and in 1872 there were 5,651 inhabitants, of whom 4,814 were Hindus (2,246 females) chiefly Játs, and 837 were Musalmáns (389 females). There are about 50 brick-built and 1,400 mud-built houses in the village. The site is slightly raised and is bounded on the west by a lake-like expanse of water, having a depth of ten feet in January, and on the east by two smaller excavations. A cut drains the surplus water hence into the Jumna at Lohári, a distance of twelve miles. The depth from the surface of water in the wells has risen, since the introduction of the canal, from 40 feet to 5 feet from the surface. In January the principal well had a depth of 25 feet of water. There are few trees, and the place has a bare look. There is no bazar and the ways are unmade, low and broken, and the whole place has a damp appearance. All around the moisture is excessive, and, according to Dr. Planck, spleen enlargement, palsy, paralysis and rheumatism are common complaints. Kirthal, according to local tradition, was founded by one Kírat of the Máli or gardener caste, who called the place, after his own name, Kírat-sthala: hence the modern name Kírthal or Kirthal. He was expelled by the Játs on their arrival in the duáb, and Játs have ever since occupied the village. Mr. Forbes writing in 1865 says:—"The Játs first gained footing in the Chhaprauli, Kutána and Baraut parganahs, driving out before them the Tagas, and thence they spread themselves, though in less compact bodies, over the whole district." The local date for this immigration is 1,100 years ago.

KITHOR or Kithor khás, a town situated in parganah Kithor and tahsíl Mawána of the Meerut district, is distant 16 miles from Meerut on the Garhmuktesar road. In 1865 the population was 3,320, and in 1872 was 3,462, consisting principally of converted Tagas of the Maheshwara *got*. The site stands to the north of the Meerut metalled road and drains by means of four culverts into a great excavation to the south of the road; still in the rains the eastern portion of the site is often flooded. The entrance to the town from the main Meerut road is at this point and passes into the small square bazar surrounded by a few shops, poor and ill-made. The houses stretch in an irregular line further west and parallel to the high road, and in the midst are the ruins of Nain Singh's fort, now used as a receptacle for rubbish. There are only about sixty brick-built houses altogether, the roadways are unmade, and the place and people look poor and miserable. There are about ten good wells, in the highest of which the water is found at a depth of 45 feet from the surface, and in the lowest at about 22 feet. The water level has risen about eight feet since the introduction of the Anúpshahr branch of the Ganges canal, which irrigates about one-third of the townland. To the north drainage flows into a second large excavation, but, on the whole, the public health is good. There is a good school here, where

some 30 pupils are taught, a police-station, and a military encamping-ground. Kithor was formerly the head-quarters of tappa Kithor in parganah Saráwa, and with Púth formed a portion of the *mukarari* of the Gújar Raja Nain Singh. The town is a purely agricultural one and possesses no trade of any kind.

KITHOR, a parganah in tahsíl Mawána of the Meerut district, is bounded on the north by pargana Hastinápur, on the south by Hápur and Garhmuktesar, on the east by the Ganges, and on the west by the Meerut parganah. Kithor, according to the census of 1872, contained a total area amounting to 189 square miles and 432 acres, of which 131 square miles and 369 acres were cultivated. The area assessed to Government revenue comprised 187 square miles and 471 acres, of which 130 square miles and 500 acres were cultivated and 34 square miles and 94 acres were culturable. The remainder was barren.

Condition of the parganah.

Like other riverine parganahs Kithor may be divided into the *khádir* or lowlands in the river valley and *bángar* or uplands. The former are extensive, lying between the Búrh Ganga, or old bed of the Ganges, and its present bed, with an average breadth of from three to six miles. The soil is fertile and yields good crops of rice, wheat, and barley. On the cliff forming the edge of the uplands the surface is broken and well-irrigation is impossible, but inland the soils of the high ground are fairly good, and the capabilities for well sinking are good, with water near the surface. The only exception is where ridges of sand intersect the good soils. These are numerous, and in their immediate neighbourhood the villages are poor, and indeed all through the parganah; though there are few that can be called altogether bad, yet there are also few that are entirely free from sand and poor patches of light soil. Irrigation has doubled in this parganah, rising from 11,292 acres to 23,234 acres, of which 10,825 acres are watered from wells, 11,845 acres from the canal, and 564 acres from tanks. Here, as elsewhere, it is noticed that the canal water has a remarkable effect in improving the quality of sugar. The tracts devoid of natural irrigation have benefitted much from the canal. At present the supply of water is insufficient for the demand, and in many villages, though large areas are entered as irrigated, the actual irrigation is but nominal. Cultivation, too, has risen from 64,862 to 81,200 acres, or 25 per cent., but there is still culturable waste equal to one-fourth of the cultivation, awaiting the plough.

Fiscal history.

The general history of the past and present settlements has been given under the district notice. The Tagas, either Hindu or Musalmán, hold 44 estates and shares in 17 others; Játs, 29; Gújars, 18; Ahírs, 12; and Rajpúts, 6. The chief tenure is *zamíndári*. Kithor contained the only *talukadári* tenure in the district, *viz.*, the small estate of Parí-chhatgarh, comprising six villages, held in *jágír* by Ráni

Sahib Kunwar up to her death in 1854, when they lapsed, and at the subsequent settlement engagements were taken from the village communities. The landless cultivators are chiefly Gújars, attracted by the pasturage lands of the *khádir*, which form the best pig preserves in the district. The following statement compares the former and present settlements :—

Period of settlement.	Total area.	Barren and revenue-free.	Culturable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ..	97,770	8,836	27,399	11,248	50,287	61,535	88,934	92,237	1 7 11
Present, Khádir,..	27,557	4,940	17,010	148	5,459	5,607	22,617	1,19,380	1 7 6
Present, Bángar ...	93,414	10,463	7,358	23,086	52,507	75,593	82,951		

Population.

According to the census of 1872 parganah Kithor contained 124 inhabited villages, of which 35 had less than 200 inhabitants ; 37 had between 200 and 500, 34 had between 500 and 1,000 ; 10 had between 1,000 and 2,000 ; 3 had between 2,000 and 3,000 ; and 5 had between 3,000 and 5,000. There are no towns containing more than 5,000 inhabitants. The total population in 1872 numbered 70,152 souls (32,559 females), giving 369 to the square mile. Classified according to religion there were 51,605 Hindus, of whom 23,716 were females ; 18,534 Musalmáns, amongst whom 8,838 were females ; and 13 Christians. Distributing the Hindu population amongst the four great classes, the census shows 5,315 Brahmans, of whom 2,490 were females ; 697 Rajpúts, including 317 females ; 2,673 Baniyas (1,210 females) ; whilst the great mass of the population is included in " the other castes" of the census returns, which show a total of 42,920 souls, of whom 19,699 are females. The principal Brahman subdivisions found in this parganah are the Gaur (4,381), Sarasút (170), Bhát (94), Acháraj (98) Dakaut, Taga and Pallewál. The Rajpúts belong to the Tonwár (218), Gaur and Chauhán (319) clans, and the Baniyas to the Agarwál (1,274), Gadariya (723), Saraugi (53), Mahesri, Raja-ki-barádari, and Rastaugi subdivisions. Other castes comprising more than one thousand persons each are the Taga (3,126) Garariya (1,526), Kahár (1,283), Ját (4,216), Kumhár (1,322), Chamár (13,358), Bhangi (2,339), Gújar (7,235), and Ahír (1,654). Those having less than one thousand members are the Máli, Jogi, Koli, Hajjám, Sonár, Barhai, Bharbhúnja, Dhúna, Juláha, Gosháin, Bairági, Káyath, Chhípi, Kalál, Nat, Lodha, Khatík, Kanjar, Saini, Pási, Baheliya, and Bengáli. The Musalmáns

are distributed amongst Shaikhs (15,580), Pathâns (1,201), Sayyids (567), and Mughals (10): the remainder are unspecified.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 426 are employed in professional advocations, such as Government servants, priests, doctors, and the like; 2,109 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 3,907 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 12,275 in agricultural operations; 3,618 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 557 persons returned as of no specified occupation. Taking the total population irrespective of age or sex, the same returns give 13,234 as landholders, 23,684 as cultivators, and 33,234 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 735 males as able to read and write out of a total male population numbering 37,593 souls. This parganah comprised only 52 villages at the past settlement, and subsequently received 75 from Meerut and other parganahs. It has lost also 3,036 acres of the area by diluvion.

KUMRUDDINNAGAR, a second-class police-station and ghát on the Búrh Ganga, in the village of Khánpur in parganah Kithor of the Meerut district, is distant 11 miles from Meerut. The population of Khánpur in 1872 numbered 574 souls. The ghát has a ferry which is well known and much used. The old site of the village was swept away by floods in 1873.

KUTÁNA, the chief town of the parganah of the same name in tahsíl Bágpat of the Meerut district, is distant 34 miles from Meerut. The population in 1865 was 3,420, and in 1871 was 3,488, occupying 1,057 houses. It is said to have been founded in the time of the Kauravas and Pándavas. About 100 years ago the people of Adilpur, mostly Tagas, were admitted into this village. The Mahájans are the principal inhabitants. There is a police-station here, and some trade in timber and bambus. The Chaukidári Act is in force in Kutána, and in 1873 supported a village police numbering eight men of all grades at an annual cost of Rs. 384. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 461, falling at Re. 0-2-0 per head of the population and Re. 0-6-9 per house assessed (1,057). The expenditure during the same year was Rs. 411, which was met from the income and a balance of Rs. 44 from the previous year.

KUTÁNA, a parganah in tahsíl Bágpat of the Meerut district, is bounded on the north by parganah Chhaprauli, on the south by Bágpat, on the east by Baraut, and the west by the Jumna. According to the census of 1871 the total area, then, contained 72 square miles and 429 acres, of which 55 square miles and 231 acres were cultivated. The area assessed to Government revenue

amounted to 72 square miles and 427 acres, of which 55 square miles and 275 acres were cultivated and seven square miles and 197 acres were culturable.

Condition of the parganah.

A few villages along the banks of the Jumna in this parganah are too high for canal irrigation, and the water is at too great a depth for wells, while sand predominates in the soil. But with this exception the entire parganah presents one uniform soil of rich black loam of surprising fertility. There is very little river-bed land in the Jumna valley. The Eastern Jumna canal with its net-work of distributaries covers almost the entire area. The irrigated area has increased from 9,319 acres to 27,408 acres, of which 8,296 acres are watered from wells. There are still 681 wells, working 702 *lâos*, but the canal is rapidly driving them out of use, and many have now fallen out of repair and been abandoned. The capabilities for well sinking are very good, water being close to the surface, and *kuchha* wells could easily be dug at a very short notice. Altogether the parganah is one of the richest in the district and produces the finest crops. The Játs hold 14 whole estates and portions of 17 others; Rawás, 3; Tagas, 3; and Brahmans, 2, while the remainder contain a mixed proprietary. The cultivators, too, are Játs, with a small admixture of Tagas, Brahmans, Rajpúts, and other castes. The general history of the past and present settlements and other matters pertaining to the fiscal history of this parganah have already been sufficiently indicated in the district notice. Eight per cent. (3,596 acres) of the total area was transferred during the currency of the past settlement, but only 437 acres fell into the hands of the money-lenders. The Játs bought 2,091 acres and sold 1,658 acres. With the exception of nine estates the whole parganah belonged to Begam Sumru (see SARDHANA).

Settlements.

The following statement compares the former and present statistics :—

Period of settlement.	Total area.	Barren and revenue-free.	Culturable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...	47,090	8,996	11,376	9,319	17,399	26,718	38,093	87,87	3 4 7
Present,...	47,178	5,342	5,893	27,408	8,535	35,943	41,836	99,825	2 12 5

Population.

The total population in 1872 numbered 45,561 souls (20,943 females), giving 624 to the square mile. Classified according to religion there were 40,708 Hindús, of whom 18,641 were females; and 4,853 Musalmáns, amongst whom 2,302 were females.

Distributing the Hindu population amongst the four great classes, the census shows 5,206 Brahmans, of whom 2,338 were females; 231 Rajpúts, including 116 females; 2,362 Baniyas (1,066 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 32,909 souls, of whom 15,121 are females. The principal Brahman subdivisions found in this parganah are the Gaur (4,407), Bhát, Dakaut, Acháraj, Bohra, Sarwariya, and Chaurasiya. The Rajpúts belong to the Chauhán clan (230), and the Baniyas to the Agarwál (1,130), Saraugi (1,093) and Bishni (139) subdivisions. Amongst the other castes the following have more than one thousand members each:—Kahár (2,548), Ját (13,628), Chamár (4,813), and Bhangi (2,250). The other castes with less than one thousand persons are as follows:—Taga, Máli, Jogi, Hajjám, Barhai, Sonár, Lohár, Kumhár, Bharbhúnja, Juláha, Gosháin, Bairági, Khattri, Chhípi, Nat, Kalál, Khatík, Dhanak, Malláh, Manihár, Rawa, and Sádh. The Musalmáns are distributed amongst Shaikhs (3,963), Sayyids (133), Mughals (49), and Patháns (245). The remainder are entered without any distinction beyond religion.

The same returns show 45 inhabited villages, of which 8 had less than 200 inhabitants; 7 had between 300 and 500; 13 had between 500 and 1,000; 12 had between 1,000 and 2,000; 3 had between 2,000 and 3,000; and one had between 3,000 and 5,000. The only town with more than 5,000 inhabitants is Surírpur, with 5,216 inhabitants.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 651 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 862 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,073 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 7,569 in agricultural operations; 1,722 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,798 persons returned as labourers and 678 as of no specified occupation. Taking the total population irrespective of age or sex, the same returns give 15,219 as landholders, 6,394 as cultivators, and 23,948 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,044 males as able to read and write out of a total male population numbering 24,618 souls. In 1840 there were 45 estates settled at Rs. 93,137; in 1841 eight were taken away, assessed at Rs. 25,411; in 1852 eleven estates, assessed at Rs. 19,327, were received, and four estates have since been created by partition, leaving 52 estates, with a revenue of Rs. 87,873, at the commencement of the present settlement. The principal villages of the parganah not having a separate

notice are Lohari with 2,903 inhabitant, and Sádikpur-Sanauli with 2,620, mostly inhabited by Játs.

LAWÁR, a large village in parganah Meerut of the Meerut district, is distant 12 miles north of the civil station. The population in 1865 was 4,840, and in 1872 was 2,784. It was the head of a *tappa* containing 45 villages including Phalauda, and is said to have been wrested from the Rajpúts by Mír Surkh, a native of Mazenderan. There is a fine house here called Mahal-sarái, built about 1700 A. D. by Jawáhir Singh, Mahájan, who constructed the Súraj Kand near Meerut. The gardens attached to it are in ruins. At Dádri, in the neighbourhood, was formerly a fortress of Nain Singh, the Gújar chieftain. It had fallen into ruin, and the line of railway now runs over the site.

LONI, a town in the parganah of the same name and tahsíl of Ghaziabad in the Meerut district, is distant 29 miles from Meerut. In 1865 the population was 3,810, and in 1871 was 4,088, occupying 856 houses. The name is derived from its being the centre of a salt tract, in Sanskrit '*lavana*,' and in Hindi '*lon*.' Shaháb-ud-dín Ghori plundered the town and ejected the Rajpúts, who were in possession, putting in their place a body of Mughals, Patháns, and Shaikhs. From that time the Mughals and Patháns have been the zamíndárs of the surrounding land which once belonged to Prithiráj, the Chauhán ruler of Dehli. The remains of his fort are still visible. Up to the time of Muhammad Sháh, emperor of Dehli, there was an old broken-down fortress of the Hindu period here, called *Sukaran Raja-ki garhi*. Muhammad Sháh razed this fort and used the bricks to build a grove and tank about 1789 A.D. To water this grove it is said that the Jumna canal was dug, though never brought into use. At Uldipur is a fine grove plainted by Zínat Mahál, wife of Baháður Sháh, king of Dehli. It is surrounded by a brick-built wall, and a sarái is built close to it. The gates are five, and in the grove is a scarlet domed *báradari*. It was confiscated after the mutiny and sold to Shaikh Iláhi Baksh of Meerut. The Kharanji Bágh too was built by Zínat Mahál, and after the mutiny bought by Shaikh Iláhi Baksh. At Loni is the Bágh Ranap, built by the wife of some Dehli emperor about 400 years ago. The walls are brick built, but in ruins, and the place is now cultivated by some Gújars. There are two famous wells at Bhaunja and Mihman sarái (also called Kot), both built by Ghází-ud-dín. At Kot was a small bágh of great celebrity, with a residence of the Dehli kings. There is now little trace of it. On the boundary of Kela, Jatwára and Bhaunja is a *báradari* where the kings of Dehli are said to have stayed on their way to Agra as the first stage from Dehli. There is a second-class police-station and a post-office in the town. The Chaukidári Act is in force in Loni, and in 1873 supported a village police numbering eight men of all grades at an annual cost of Rs. 384. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 367, falling at Re. 0-1-5 per head of the population and Re. 0-8-9 per house assessed

(667). The expenditure during the same year was Rs. 322, which was met from the income and a balance of Rs. 37 from the previous year.

LONI, a parganah in tahsíl Ghaziabad of the Meerut district, is bounded on the north by Bágpat, on the west by the Jumna river, which separates it from Dehli, on the east by Jalálabad and Dásna, and on the south by the Bulandshahr district. According to the census of 1872 the total area then amounted to 155 square miles and 602 acres, of which 104 square miles and 524 acres were cultivated. The area assessed to Government revenue was set down at 151 square miles and 111 acres, of which 103 square miles and 47 acres were cultivated. Of the remainder 17 square miles and 106 acres were unculturable.

Condition of the parganah.

In the southern portion of the parganah the Hindan river, debouching from the uplands, approaches the Jumna previous to their junction some ten or fifteen miles lower down. The *khádir* lowlying lands along the beds of both rivers intermingle here, and together comprise the greater portion of the area of the parganah. There is a gentle slope, however, from the line of the highlands towards the Jumna, and the upper portions of this differ so widely in character from the lower and both from the uplands that the parganah has been divided into three separate tracts for assessment purposes. The lower river-land is occupied as pasturage by Gújars, who prefer leaving the land under grass and gathering its wild products to bringing it under the plough. This portion of the district, from its proximity to Dehli, suffered much during the mutiny. The Gújars rose and plundered in all directions; their hands were against every man, and every man's hands against them. Whole estates are even now only slowly recovering the destruction wrought during that period. The liability to inundation, too, will also long retard its advance in cultivation. The higher river-lands possess good soils with great facilities for well-irrigation. They are almost invariably highly cultivated, producing fine wheat, cotton, and tobacco. In a few places where canal water can be obtained sugarcane is grown. The upland tract, which at Bágpat, about twelve miles above Dehli, is close upon the Jumna, thence takes a sudden bend to the south-east, joining the high bank of the Hindan near Ghaziabad, about ten miles from the Jumna. It thus forms an acute-angled triangle with its base to the north. Along its edges the land is rough and uneven with very light soils, but inland they are of the richest character, with good natural drainage and a plentiful supply of water from the Eastern Jumna canal.

Fiscal history.

The general history of the past and present settlements and other matters pertaining to the fiscal history of the parganah have been sufficiently indicated in the district notice. There are 130 revenue-paying and three revenue-free estates; of these 31 are held by Gújars, with shares in 13 others; Tagas hold 25 with shares in ten others; Chauháns have eight, with shares in five others; Játs eight, with shares in one

other, and Shaikhs seven with shares in six others. With the exception of a few Musalmán estates the proprietors are also the cultivators. Mr. Forbes observes the difference in character between the Gújars of the uplands and those of the tracts lying along the banks of the Jumna ; in the former case they vie with their Ját neighbours in their cultivation of the land, and in the latter still adhere to the nomadic, predatory habits which have procured for the Gújar the synonym of riever and cattle-lifter. Mr. Forbes attributes this salutary change " to the humanising influence of the canals." Transfers have amounted to 28 per cent., of which 14 are due to private sales, 7 to forced, and 7 to mortgage. Gújars and Tagas have been the largest sellers, and Brahmans and Rajpúts the most extensive purchasers. Káyaths, Sayyids, and Afgháns would appear also to have freely invested in land in this parganah. Irrigation has increased from 7,051 acres at the last settlement to 23,511 acres, of which 16,857 acres are watered from wells and tanks, and 6,654 acres, in the uplands, from canals. Wells have increased in number and are still increasing. Cultivation has also risen from 53,831 acres to 63,408 acres. In the *rabí*, wheat forms 21 per cent. of the total produce from both harvests ; barley, 7 per cent. ; *gojái* (or wheat and barley) 17 ; and gram, 6. In the *kharíf*, sugarcane is given as but one per cent. ; cotton, 7 ; maize, 4 ; *chari*, 5 ; and *joár* and *bájra*, 23. The cultivation of sugarcane and the species *(paunda)* grown for eating, and vegetables for the Dehli market is extending. The following statement compares the results of the former and present settlements :—

Period of settlement.	Total area.	Barren and revenue-free.	Culturable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivable area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres	Rs.	Rs. a. p.
Former, ...	96,145	21,469	22,447	6,766	45,463	52,229	74,676	76,878	1 7 6
Present, ... Khádir, ...	16,362	2,373	3,405	3,692	6,892	10,584	13,989	95,261	1 8 7
Present, ... Bángar,...	83,440	13,631	18,514	19,243	32,052	51,295	69,809		

Population.

According to the census of 1872 parganah Loni contained 118 inhabited villages, of which 40 had less than 200 inhabitants ; 36 had between 200 and 500 ; 27 had between 500 and 1,000 ; 9 had between 1,000 and 2,000 ; 3 had between 2,000 and 3,000 ; and one had between 3,000 and 5,000. The towns containing more than 5,000 inhabitants were Gháziabad with 7,365 inhabitants, and Shahdara with 7,257 inhabitants. The total population in 1872 numbered 66,145 souls (30,066 females), giving 424 to the square mile. Classified according to religion there were 52,725 Hindus, of whom 23,803 were females ; 13,411 Musalmáns,

amongst whom 6,258 were females ; and 9 Christians. Distributing the Hindu population amongst the four great classes, the census shows 5,807 Brahmans, of whom 2,692 were females ; 2,521 Rajpúts, including 1,129 females ; 4,372 Baniyas (2,051 females) ; whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 40,0 5 souls, of whom 17,931 are females. The principal Brahman subdivisions found in this parganah are the Gaur (5,029), Bhat (122), Sarasút (31), Dakaut (109), Acháraj (161), Gujráti, Chaurasiya, Dasa, and Sarwariya. The Rajpúts belong to the Chauhán (1,990), Tonwár (249), and Gahlot clans, and the Baniyas to the Agarwál (3,935), Saraugi (357), and Gadariya subdivisions. The other castes having more than one thousand members each are the Taga (4,462), Hajjám (1,115), Ját (2,078), Chamár (11,031), Bhangi (2,607), and Gújar (9,839). Those with less than one thousand members are the Máli, Jogi, Gararíya, Kahár, Barhai, Sonár, Lohár, Kumhár, Bharbhúnja, Dhúna, Juláha, Gosháin, Ahír, Bairágí, Khattri, Káyath, Chhípi, Dhobi, Nat, Lodha, Khatík, Agariya, Malláh, Orh, and Ráj. Musalmáns are distributed amongst Shaikhs (5,771), Sayyids (348), Mughals (333), and Pathán (1,114) ; the remainder are undistinguished.

Occupations.

The occupations of the people according to the census of 1872 show that 447 male adults were employed in professional avocations ; 2,913 in domestic service ; 2,144 in commerce ; 10,049 in cultivating the soil ; 3,279 in the mechanical arts and manufactures, whilst 3,220 were returned as labourers and 447 as of no specified occupation. The callings of the total population show 15,142 as landowners, 14,474 as cultivators, and 36,529 as engaged in occupations unconnected with agriculture. The educational statistics only give 1,211 males as able to read and write out of a total population numbering 36,079 males. In 1809 Bágpat, Loni, Chhaprauli, and Phugána formed one tahsíl. At Sir H. Elliott's assessment Loni comprised 106 villages ; then came the first revision, adding eight and taking away two villages. In 1853 two villages were transferred to Jalálabad and the remainder to Dehli. The parganah was restored in 1859 with 130 villages, forming 132 estates, *viz.*, 104 out of the 110 which had been taken and 26 new villages formerly belonging to Dehli. The parganah at present contains 129 villages and 132 estates. The difficulty in tracing out the past fiscal history of any tract can readily be imagined when Loni is only a very common example of the total disruption of old landmarks perceptible in almost every parganah in these Provinces.

Notable places.

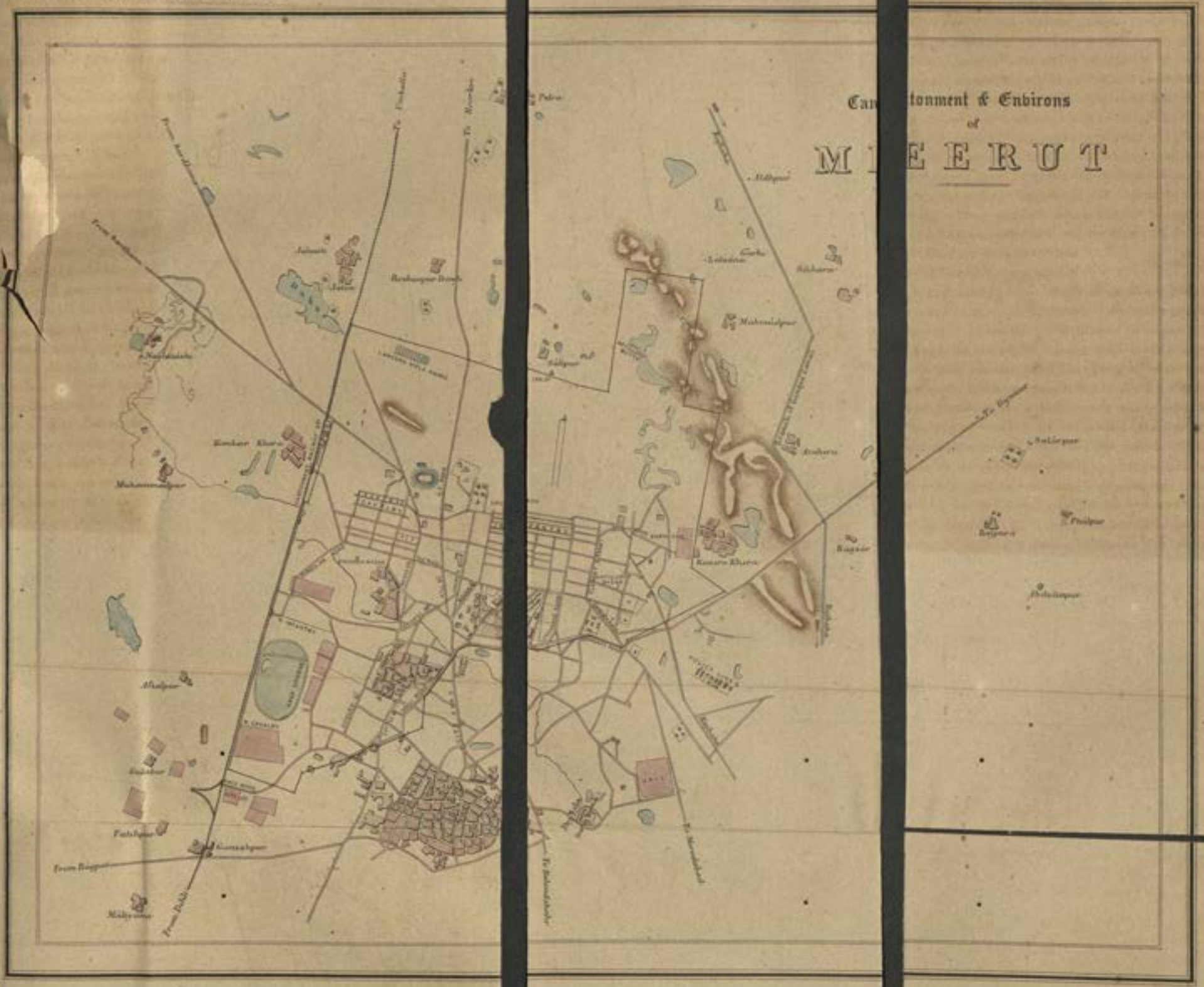
The places of note not mentioned separately are Jhalmala, with a ruined sarái, said to have been built by a *fakír* ; Mandola, a good sized village, inhabited by Tagas, and said to have been built by one Mán Datt Rikhi. At Behta Hájipur is he dargáh of Abdallah Shah and a mosque built by Aurangzeb where a fair is

held every year. Lál Khán's sarái at Mahroli, the Trigonometrical Survey tower *(yarhgaj)* at Aurangabad, and Farrukhsiyár's sarái at Farrukhnagar are the only other objects of interest in the parganah.

MAU, a village in parganah Meerut, is distant eight miles from Meerut. The population in 1872 numbered 999 souls. It has a second-class police-station.

MAWÁNA or Mawána Kalán, a town in parganah Hastináp ur of the Meerut district, is distant 16 miles from Meerut as the crow flies. The population in 1847 was 5,271, in 1852 was 6,486, and in 1865 was 6,864. In 1872 there were 6,714 inhabitants, of whom 3,512 were Hindus (1,633 females) and 3,202 were Musalmáns (1,498 females); chiefly Chauháns, Ghosís, and Gadís (Musalmáns), occupying 1,550 houses. The houses are nearly all mud-built; the only exceptions are a few shops in the bazar, which runs from north to south in a narrow winding course. The roadways are well cared for and the main bazar-way is metalled and has saucer-drains on either side. The water in wells has risen from 18 to 12 feet from the surface since the opening of the Anúpshahr branch of the Ganges canal, which runs through the town land. The town is essentially an agricultural one, and most of the inhabitants are employed in cultivating the extensive lands attached to the town, which occupy an area of 4,581 acres. There is a market on Thursdays and Saturdays. The well water is good, still fever prevails after the rains. As usual, there are numerous excavations full of water which becomes stagnant during the hot season. One of these pools, almost four acres in extent, and which lay within the town site, has recently been filled up. There is a small village school here and a sarái. The tahsíli and post-office are situated in a walled enclosure outside the town to the north, and the police-station is in the north-western part of the town near the sweepers' quarter. A large brick-built tank on the Bahsúma road was constructed by one Kesho Dás of Jánsath, and has recently been repaired by a Meerut mahájan. On the banks of the ruined Indi tank is a fine old temple built some 300 years ago. Mawána was held in direct management by Government in 1872. It is an old town and was called Mumána, some say from one Mána, a huntsman, and reputed maternal uncle of the Kauravas ; others say from one Máshkan, and that the name is merely a contraction for 'Máshkan ke khera.' The original site of the village was on a hill close by, and it was removed to its present position owing to the breaking out of fires, which the inhabitants attributed to supernatural agencies. The Chaukidári Act is in force in Mawána, and in 1873 supported a village police numbering seventeen men of all grades at an annual cost of Rs. 1,044. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 2,017, falling at Re. 0-4-9 per head of the population and Re. 1-8-4 per house assessed (1,325). The expenditure during the same year was Rs. 2,036, which was met from the income and a balance of Rs. 2,032 from the previous year.

The site.



LITHOGRAPHED AT THE S RVEYOR GENERAL'S OFFICE, CALCUTTA, MARCH 1906.
From a reduction of Mr. E. T. S. Johnson's Plan of Meerut Cantonment, 1st. 6d supplied by E. T. Atkinson, Esq. in charge of the N. W. P. Gazetteer.

MAWÁNA, a tahsíl in the Meerut district, comprises the parganahs of Kithor and Hastinápur. The total area, according to the census of 1872, then contained 431 square miles and 138 acres, of which 257 square miles and 259 acres were cultivated. The area assessed to Government revenue was given at 429 square miles and 60 acres, of which 256 square miles and 328 acres were cultivated, 114 square miles and 430 acres were culturable, and 57 square miles and 582 acres were barren. The land-revenue during the same year stood at Rs. 2,66,225 (or with cesses Rs. 2,92,903), falling at Re. 0-15-5 per acre on the total area, Re. 0-15-6 per acre on the area assessed to Government revenue, and Re. 1-9-10 on the cultivated acre. The population numbered 145,496 souls (67,171 females), giving 338 to the square mile, distributed amongst 260 villages. The same statistics show 7 persons insane, 8 idiots, 23 deaf and dumb, 360 blind, and 65 lepers in the tahsíl. All other matters pertaining to the history of the Mawána tahsíl have been given under the district notice or separately under each parganah.

MEERUT (Mírath), the chief city of the district and division of Meerut, is situated in the upper duáb, in north lat. 29°-0′-41″ and east long. 77°-45′-3″. The elevation of the stone bench-mark imbedded in the north-west corner of the churchyard is 734·46 feet above the level of the sea; that of the second bench-mark imbedded in the churchyard near the western wall by the entrance is 735·47 feet, and that of a cross mark on the surface of the stone slab opposite the north pillar of the central west doorway is 739·30 feet above the level of the sea. Under the name Meerut are included the bazars of the cantonments as well as the city and its suburbs. The city proper lies to the south of the cantonments and to the east of the Meerut city station of the Sindh, Panjáb, and Dehli Railway. The city was originally surrounded by a wall and a ditch pierced by nine gates, of which eight are of some antiquity and one is comparatively new. They are the Dehli, Chamár, Lihsári, Shoráb, Sháh Pír, Burhána, Khairnagar, Kamboh, and the Bágpat gate of recent origin. The Chamár gate is situated in the ward of that name. The Lihsári gate derives its name from the village of Lihsári to the south of Meerut. The Sháh Pír gate is close by the *makbira* of a Musalmán of that name. The Khairnagar gate was built by Nawáb Khair-andesh Khán, and the Kamboh gate by Abu Muhammad Khán Kamboh. There are 38 muhallas or wards in the city, the names of which for the most part explain their position, or the caste of the inhabitants, or are taken from some remarkable person living there or some noted place within them. They are: (1) Bírucháh or Bíru's well; (2) Cháh Godha Bhat; (3) Cháh Miumáran or masons' well; (4) Khari Kúa or saline well; (5) Thaterwára or the brass-founders' quarter; (6) Játiwára; (7) Chhípiwára or calico-printers' ward; (8) Topchiwára or gunners' quarter; (9) Bhatwára; (10) Paryawára; (11) Mahájanpára; (12) Moripára;

The city.

The muhallas.

(13) Swámipára; (14) Khairnagar; (15) Dálampura; (16) Kotla; (17) Kánúngoyán; (18) Smithganj, from the Collector of that name, by whom it was built in 1825; (19) Bazar Kohna, the oldest in Meerut; (20) Shah Nathan, after a *fakír* of that name who died here; (21) Karam Ali; (22) Nakárchiya tola; (23) Ján; (24) Ráizádagán; (25) Darodgarán; (26) Khandak Kahárán; (27) Sabúngarán; (28) Bába Kháki, from a *fakír* of that name; (29), Kamángarán; (30) Sarái Zínat, called after Begam Zínat of Lucknow; (31) Sháh Pír; (32) Sarái Bahálím; (33) Mashái Khán; (34) Bani Sarái; (35) Holi Muhalla; (36) Naugaza; (37) Zahidiyán; and (38) Khishtpazán or brick-makers' quarter. There are ten bazars:—Kohna, Antarám, Pahra, Guzári, Lála bazar, Mirza bazar, Smithganj, Wylieganj, built in 1855; Sapteganj, built in 1860; and Mandi. There are six saráis, four inside the walls and two outside. Smithganj, which combines in itself, a muhalla, a bazar and a sarái is the largest.

Amongst the remains of former times in and around Meerut may be noticed the Suraj kund, commonly called by Europeans 'the monkey tank.' It was constructed by Jawáhir Mal, a wealthy merchant of Láwár, in 1714. It was intended to keep it full of water from the Abu Nála, but at present the tank is nearly dry in May and June. There are numerous small temples, dharmsálas and *sati* pillars on its banks, but none of any note. The largest of the temples is dedicated to Manohar Náth, and is said to have been built in the reign of Sháhjahán. The Baleswarnáth temple is the oldest in the district and dates from before the Musalmán invasion. The Maheshwar temple is also an old one, and its construction is popularly attributed to some of the direct descendants of the Pándavas. The tank called Táláb Mátawála was built in 1714 by Lála Dayál Dás, a Káyath merchant. It has now silted up and only the walls remain. The dargáh in the Nauchandi muhalla is said to have been built from the remains of an old temple pulled down by Kutb-ud-dín. The dargáh of Sháh Pír is a fine structure of red sandstone, erected about 1620 A.D. by Núrjahán, the wife of the Emperor Jahángír, in memory of a pious *fakír* named Sháh Pír. An *urs* or religious assembly is held here every year in the month of Ramazán. The dargáh is supported from the proceeds of the revenue-free village of Bhagwánpur. The Jámah Masjid is said to have been built in 410 *Hijri* (1019 A.D.) by Hasan Mahdi, vazír of Mahmúd Ghaznavi, and was repaired by Humáyún. The remains of a Buddhist temple have recently been discovered near this spot. The dargáh of Makhdum Sháh Wiláyat is situated near the Collector's office. Some say that the dargáh was built by Shaháb-ud-dín Ghori; others again say that Makhdum Sháh Wiláyat was the son of the Ghorian conqueror who died at Meerut and was buried here by his father. The *makbira* (or mausoleum) of Abu Muhammad Kamboh was built by his family in 1658 A.D. The *makbira* of Salár Masaúd

Places of note.

Gházi is attributed to Kutb-ud-dín Aibák in 1191 A.D. The *makbira* of Abu Yár Muhammad Khán is said to be 300 years old. The *karbala* was built at the beginning of the last century. There are two large imámbárahs,—one near the Kamboh gate and another in the Zahidi muhalla, and an ídgáh on the Dehli road was built about 1600 A.D. There is a mosque built by Nawáb Khairandesh Khán in the Saráiganj, and besides those already mentioned there are sixty-six mosques and sixty temples in the city, none of which, however, deserve any particular notice. Amongst the recent buildings the tahsíl and police-station are remarkably good. A debating society was established in 1868, and in 1870 a fine house was erected for its meetings in Sapte's bazar.

Population.

The population of Meerut city in 1847 was only given at 29,014. In 1853 more correct returns showed 40,276 exclusive of cantonments, which were given at 41,759. A rough calculation made in 1860 reduced the cantonment population by one-half, due in a great measure to the mutiny, when numbers of the inhabitants were ejected, whilst others who had taken refuge in flight on account of their participation in the mutiny reduced the numbers. The population of the city and cantonments is given at 79,378 in 1865. For 1872 we have fuller statistics, and these give a population of 81,386 for both city and cantonments, of whom 47,606 were Hindus (21,136 females), 33,532 were Musalmáns (16,092 females), and 248 were Christians (123 females), exclusive of the military. Ninety-seven are shown as Bengális, 125 as Panjábis, and 12 as Afgháns. There were 14,593 enclosures in the city and cantonments, of which 8,702 were occupied by Hindus, 5,851 by Musalmáns, and 42 by Christians. There were 18,951 houses, of which 7,986 were built with skilled labour, and of these 3,185 were occupied by Musalmáns and 11 by Christians. Of the remaining 10,965 mud-built houses, 4,469 were occupied by Musalmáns and 48 were occupied by Christians. Distributing the population amongst the rural and urban classes, we find 694 persons returned as landowners, 2,475 as cultivators, and 78,217 persons pursuing avocations unconnected with agriculture. Taking the male adult population (exceeding fifteen years of age) numbering 29,349, we find the following occupations pursued by more than fifty members each:—Bakers (82), barbers (415), beggars (566), blacksmiths (84), braziers (91), bricklayers (370), butchers (254), carpenters (250), carpet-makers (87), cart-drivers (138), cooks (141), confectioners (139), contractors (97), cotton-cleaners (114), cultivators (972), doctors (76), dyers (102), fishmongers (89), flower-dealers (224), fruit-sellers (85), goldsmiths (190), gold-lace makers and wire-drawers (71), Government servants (157), grain-dealers (135), grasscutters (209), grain-parchers (85), grocers (63), grooms (216), herdsmen (59), labourers (4,501), lac-workers and sellers (55), landowners (320), leather-dyers (92), lime-sellers (66), merchants (286), cloth-sellers (262), milk and butter-sellers (249), money changers (90), money-

lenders (121), oil-makers (154), painters and varnishers (143), pandits (247), pedlars (109), petty dealers (62), porters (load-carriers) (159), potters (137), priests (139), purohits (61), schoolmasters (75), servants (8,974), shopkeepers (2,526), shoemakers and sellers (353), singers and musicians (179), sweepers (671), tailors (600), tobacco-sellers (69), vinegar-sellers (185), washermen (356), water-carriers (446), weavers (984), and wood-sellers (95).

Municipality and trade.

Though there is a considerable trade in Meerut, it is not essentially a trading centre, and cannot rank in this respect with Háthras and Khúrja. Since the opening of the railway from Ghaziabad, in February, 1867, and through Meerut to the Panjáb in January, 1869, trade has improved, but to no great extent. The only trade returns that we possess are those relating to the octroi, and these only refer to the city proper, and do not include the equally important trade in cantonments. Up to 1868 the Chaukidári Act was in force in the city, and since then the Municipal Act. The affairs of the municipality are now managed by a committee of fifteen members, of whom five are official and ten are elected by the tax-payers. The income is derived from an octroi impost, which in 1872-73 fell at Re. 0-8-3 per head of the city population. The following statement shows the income and expenditure of the municipality for three years, and the succeeding statement shows the quantity or value of the imports for two years. In 1873-74 the population of the city was estimated at 51,991 souls, giving an incidence of taxation amounting to Re. 0-10-10 per head :—

Receipts.	1871-72.	1872-73.	1873-74.	1874-75.	Expenditure.	1871-72.	1872-73.	1873-74.	1874-75.
	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
Opening balance, ...	3,596	11,285	3,289	8,882	Collection, ...	4,070	4,031	2,567	2,312
Class I.—Food and drink, ...	24,037	19,054	18,241	18,062	Head-office, ...	1,317	1,025	200	192
„ II.—Animals for slaughter,	...	2,083	2,825	2,772	Original works, &c., ...	1,446	7,796	4,569	3,268
„ III.—Fuel, &c.,... ...	1,417	2,434	2,255	2,045	Repairs, &c., ...	4,403	8,252	6,180	7,268
„ IV.—Building materials, ...	3,247	4,085	6,474	3,528	Police, ...	12,024	11,961	11,897	11,943
„ V.—Drugs, spices, ...	1,382	1,108	936	1,051	Education.... ...	360	460	480	480
„ VI.—Tobacco, ...	978	233	977	771	Conservancy, ...	3,261	4,719	3,659	10,200
„ VII.—Textile fabrics, ...	...	...	3,321	4,167	Charitable grants, ...	596	543	990	711
„ VIII.—Metals, ...	...	...	366	450	Road watering, ...	1,081	206	...	...
Total octroi, ...	31,061	29,007	35,398	32,840	Lighting, ...	839	732	740	800
Rents, ...	1,733	1,994	3,855	10,803	Fairs and gardens, ...	...	16	103	123
Fines, ...	259	135	346	291	Extraordinary, ...	...	300	...	385
Pounds, ...	...	61	135	105	Miscellaneous, ...	544	390	480	508
Extraordinary, ...	446	204	...	...					
Fairs, ...	...	91	...	...					
Miscellaneous, ...	4,281	943	3,725	5,410					
Total, ...	41,176	43,702	46,467	59,357	Total, ...	29,991	40,431	37,865	38,190

Statement showing import of taxable articles for two years into the Meerut Municipality.

Articles.	Net imports in				Consumption per head in			
	1873-74.		1874-75.		1873-74.		1874-75.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Mds.	Rs.	Mds.	Rs.	M. s. c.	Rs. a. p.	M. s. c.	Rs. a. p.
Grain, ...	255,361	...	244,650	...	4 36 6	...	4 28 2	...
Sugar refined, ...	5	...	11	...	...	...	0 0 1	...
Ditto unrefined, ...	30,520	...	28,992	...	0 23 7	...	0 22 1	...
Ghi, ...	5,178	...	5,144	...	0 3 15	...	0 3 15	...
Other articles of food,	36,707	17,167	42,205	19,820	besides 51,415 bundles *pán*.		besides 57,123 *dolls* of *pán*.	
Animals for slaughter,	...	...	2,772 No.	...	...	...	...	...
Oil and oil-seeds, ...	14,116	...	11,317	...	0 10 12	...	0 9 7	...
Fuel, &c., ...	34,088 loads.	5,915	30,043 loads.	6,372	...	0 1 4	...	0 2 0
Building materials, ...	5,765	2,03,427	4,623	1,11,881	0 3 15	3 14 1	0 3 9	2 2 5
Drugs and spices, ...	858	37,921	811	4,6218	0 0 10	0 11 8	0 0 10	0 14 3
Tobacco, ...	8,394	...	6,454	...	0 6 7	...	0 4 15	...
European and native cloth.	...	2,05,300	...	2,60,982	...	3 15 2	...	5 0 4
Metals, ...	...	23,353	...	29,039	...	0 7 2	...	0 8 11

Cantonments.

In the cantonments there are five bazars : the Lál-kurti (infantry), Topkhána (artillery), Regiment (English cavalry) and Risálah (Native cavalry). The Meerut Church, begun in 1819 and completed in 1821, is the most important structure of modern date. It is built of brick and stucco, and is 150 feet long, 84 feet wide, and being galleried all round can contain 3,000 persons. It has a handsome high spire and its appearance is striking. The expense of the building was partly defrayed by subscription and partly by a grant from Government. Amongst the subscribers was Begam Sumru. There is also a Roman Catholic Church, which has recently been enlarged, and a Mission Chapel built by Begam Sumru. The Mission Church was completed in 1869. In connection with it is the Meerut Asylum, supported by the European residents, for the relief of Europeans and Christians in distress. The Meerut Mall is considered one of the finest drives in India. The Wheeler Club is situated on the Mall and was opened in 1863. The offices of the Commissioner, Judge and Magistrate lie outside of but close to the cantonments, which contain ranges of barracks for the accommodation of cavalry, infantry and artillery. In 1875 the garrison comprised two batteries of horse artillery head-quarters and two batteries of field artillery, one regiment of European cavalry, one regiment of European infantry, one regiment of native

cavalry and one regiment of native infantry. It is the head-quarters of the Meerut Division, comprising the garrisons at Meerut, Roorkee, Landour, Dehra, and Dehli. The central jail, completed in 1819 and capable of holding 4,000 prisoners, is built on the concentric principle and covers an area of 219 bighas. The district jail lies more to the east. The establishment of a military prison in the town was contemplated at one time, as an experimental measure, with the view of ascertaining the practicability of substituting local imprisonment for the inefficient punishment of transportation, but the idea was, however, abandoned. There is a good theatre and assembly-rooms in cantonments.

Water and drainage.

Many of the best wells in Meerut were constructed during the Marhatta rule. The water, as a rule, is good and is found at a depth of from eight to fifteen feet from the surface. The city site is somewhat undulating, but in the suburbs and cantonments the surface is usually level, and hence arises the difficulty that has been found in elaborating an efficient scheme of drainage. The Abu Nála forms the natural drainage line for both the city and cantonments, and has been deepened of late years to carry off the surplus water from both: but care must be taken lest it be made too deep, for the fall between Meerut and Sarái Kázi, where the Abu joins the East Káli Nadi, cannot be more than a few feet. The principal drain (the Ganda Nála) has recently been paved with brick and is connected with the Abu Nála. The latter drainage line has had a large increase of water flowing in it in some places of late years, while in others it is almost stagnant, forming wide pools. This is due almost entirely to the very serious rise of the spring level of the Meerut land during the past few years. A comprehensive system of drainage connected with a realignment of levels which shall prevent the accumulation of stagnant water in such places as the Moriwára muhalla has recently been taken in hand and has already advanced considerably towards completion. The water in the cantonment wells was analysed in the end of April and the beginning of May, 1867, by Dr. Gage. The wells selected for the purpose were—(1) well 1½ in the Royal artillery lines, used by the men of the artillery: (2) well 101, used by the sick of the artillery: (3) well 23, used by the sick in the infantry hospital: (4) well 11½ in the artillery lines, and (5) well 103½, used by the European infantry for general purposes. Dr. Gage remarks that the prevalent opinion is that "the drinking-waters in Meerut are very good, and that no diseases can be ascribed to their use." The results of his examination show that the physical properties of the water in all the wells, after passing through filter paper, were unexceptionable with an alkaline re-action. Ammonia and nitrous acid were not detected, and only in one well was there an almost inappreciable quantity of nitric acid. In the samples from all the wells phosphoric acid was precipitated. There were

traces of silica and sulphate of soda throughout; the sulphate of soda in well (2) registering 2·3. The remainder of the analyses may be tabulated as follows:—

Number of well.	Degree of total hardness.	Degree of permanent hardness.	Grains of oxygen required to oxidise the readily oxidisable organic matter in 1,000 grains of water.	Solids in 70,000 grains of filtered water.	Volatile matters.	Mineral matters.	Earthy salts, &c., insoluble in water.	Lime as carbonate.	Soluble salts.	Chloride of sodium.	Carbonate of soda.
1	10·11	2·027	·00004	16·66	1·26	15·4	11·76	7·7	3·64	0·84	2·6
2	0·12	4·2	·00008	16·25	1·855	14·35	8·4	7·525	5·95	1·6	·95
3	7·04	2·07	·000037	12·81	1·61	12·2	8·05	7·175	3·15	·525	2·4
4	9·5	2·0	·00005	16·1	3·5	12·6	8·75	·65	3·85	1·6	2·2
5	8·8	3·7	·000072	13·3	1·89	11·41	Vitiated.	Vitiated.		1·68	·85

Climate.

The meteorological detailed statements for two years are given under the district notice, and I give here for comparison the average range of the thermometer for the years 1833-34-35, before canal irrigation was introduced, taken from the records of the Medical Department:—

Month.	Sunrise.		Noon.		3 P. M		Month.	Sunrise.		Noon.		3 P. M.	
	Maximum	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.		Maximum.	Minimum.	Maximum.	Minimum.	Maximum	Minimum.
January, ...	54	32	73	54	73	55	July, ...	82	75	89	78	90	78
February, ...	60	38	81	57	84	61	August, ...	81	74	91	76	92	77
March, ...	67	47	85	62	88	62	September,...	84	69	87	76	88	75
April, ...	76	58	97	72	97	73	October, ...	73	55	84	70	85	71
May, ...	89	71	97	88	100	88	November,...	63	45	75	65	76	66
June, ...	90	74	101	77	102	78	December, ...	58	38	66	55	67	56

Dr. J. Murray on Meerut in 1838.

The following description of the climate and health of Meerut in 1838 by Dr. J. Murray is reproduced for the same reason:—"Meerut is considered one of the most healthy stations in India. The average mortality during the last four years has been 2⅓ per cent. amongst the Europeans and ⅓rd per cent. amongst the natives. The climate passes through great changes in temperature and humidity, but these are generally gradual and regular. The weather for five months, *viz.*, from October to April, is delightfully cool and invigorating. The prevailing winds are westerly and northerly, with little rain. In January the ground in the mornings is frequently covered with hoarfrost. Woollen clothing and fires

are found necessary to comfort. In November and March the direct rays of the sun are very powerful, yet this is the most healthy season of the year; the diseases are of an inflammatory nature and the fevers are intermitting. Hepatic disease, with a strong tendency to abscesses, is common during this period. In April the hot westerly wind commences: at first it begins in the afternoon and ceases at sunset, afterwards in the morning, and continues during the greater part of the night. It ceases in June. During this season there are occasionally typhoons—strong gales, from the north-west, coming on suddenly, carrying before them clouds of dust and leaves, accompanied by lightning and thunder, frequently terminating in rain, and leaving the air very cool and refreshing. During this season the lightest clothes are necessary for comfort. Most houses and the barracks and hospitals are kept cool by means of tattis, whilst the circulation of air is kept up in the rooms by punkahs during the day and occasionally during the night also. These expedients do not agree with all people even when well, and I have seen decided bad effects from them, in diseases induced by checked perspiration. By means of tattis and punkahs, and keeping in the house during the day, this season passes not unpleasantly, especially as, though hot and relaxing, it is not generally unhealthy. Many who have suffered severely from rheumatism, remittent fever, and spleen enjoy better health than during any other period of the year. Fruit is abundant, as strawberries, loquats, peaches, apples, grapes, mangoes, &c. These eaten in an unripe state, combined with imprudently sleeping behind tattis or in the open air, are frequent causes of dysenteric complaints; inflammation, intermittent fevers, and acute hepatic attacks are also common from exposure to the sun. Convalescence is less rapid than during the cold season. Towards the end of June the winds become variable and the weather close and cloudy, with occasional showers in the intervals, between which it is extremely oppressive, hot and damp. The regular rainy season then sets in, and it rains with little intermission, and continues pretty cool till the beginning of September; during this month it is cloudy, with little wind, and occasionally extremely hot and exhausting: this is the most unhealthy season of the year. Dysenteric attacks are frequent, and typhoid, intermittent or remittent fevers very common, particularly amongst the grass-cutters, whose occupation exposes them to unhealthy alluvial exhalations. In October, though the days are very hot, the nights gradually become cool and pleasant; the changes of temperature are considerable, and they are much felt by those whose constitutions have been debilitated by the previous hot and rainy seasons: dysentery and remittent fever, of a more asthenic type than at the other seasons, are common; convalescence is slow during this season. The climate is found to be favourable to many of the diseases induced by residence in other more damp parts of India. Europeans do not often suffer from a first attack of remittent fever, though returns of this disease

occur during the latter part of the rains. The general character of the diseases is asthenic, and, except in hepatic cases, not leaving great organic derangement."

The following table shows the rain fall as registered by the canal authorities in Meerut for a series of years:—

Year.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Total.
1866-67...	...	...	·7	10 6	12 0	1·4	·2	...	...	...	·7	·7	26·80
1867-68...	1·4	1·4	1·7	13·1	21·5	2·3	·9	...	·7	1·4	·9	·3	36·60
1868-69...	1·0	·9	1·0	9·7	...	4	...	...	...	·9	·5	2·4	16·80
1869-70...	...	...	...	6·6	2 6	6 0	1·2	...	·2	...	...	1·6	18·20
1870-71...	1·30	...	13·90	11·00	7·60	4·20	...	...	·40	·70	2·40	...	41 50
1871 72...	·10	3·73	6·85	9·79	5·85	·50	...	...	1·80	3·10	·90	...	32·62
1872-73...	·42	·20	3·07	8·85	8 86	5·90	...	...	·58	·40	...	·90	29·16

Routes.

From Meerut military routes branch off to all parts of India: by Sihání to Dehli, 40⅞ miles or three marches; by Bágpat to Dehli, 53⅜ miles or four marches; by Bahsúma to Bijnor, 38¼ miles or four marches; by Shámli to Karnál, 64 miles or five marches; by Muzaffarnagar to Landour, 118⅜ miles or 11 marches; by Garhmuktesar to Moradabad, 72⅝ miles or seven marches; by Khátauli to Roorkee, 64 miles or five marches; by Saháranpur to Simla, 214⅝ miles or 19 marches; to Umballa (Ambála), 133¼ miles or 12 marches; to Aligarh, 80½ miles or seven marches; and to Bareilly, 130 miles or 12 marches. The halting-places will be noted in the alphabetical arrangement of each district within which they are situated.

History.

The people give four derivations for the name Meerut:—(1) Yudhishhira, on becoming king of Indraprastha (Dehli), is said to have given his village of Meerut to Mai (called also Dára), a distinguished architect, in exchange for a palace and grounds belonging to this man at Indraprastha. Mai called his new possession Mairáshtra, and built the *Andar-kot*, a high brick fortress, existent now. (2) The Játs allege that Meerut was founded by a colony of their caste belonging to the Maháráshtra *got*. There is now in the city a Ját muhalla. (3) Others say that Meerut received its name from forming part of the dominions of Maipál or Mahipál, king of Indraprastha; (4) others again say Meerut was in very ancient times called *Mahidant-ka-khera*. The general history of the town is given in the district notice, and may be very briefly summarised here. Undoubtedly the oldest monument connected with it is the column raised by order of the Buddhist emperor Asoka, in the third century before Christ, and which is now on the ridge at Dehli. It bears the following inscription:—"This pillar was erected originally at

Meerut in the third century B. C., by king Asoka. It was removed thence and set up in the Kushak Shikár palace near this by the Emperor Fíroz Shah, A.D. 1256. Thrown down and broken into five pieces by the explosion of a powder magazine, A.D. 1713-1719; it was restored and set up in this place by the British Government, A.D. 1867." Traditionally, Meerut was first captured by Salár Masáúd in the early part of the eleventh century. Firishta mentions its capture by Mahmúd Ghaznavi in 1019 A.D., from Hardatta, ruler of Baran, Koil and Meerut, who ransomed Meerut for 2,50,000 dinárs and 50 elephants. It was again captured by Kutb-ud-dín Aibak in 1191 A.D., who built the Jamah Masjid. Tarmsharín Khán, Mughal, made an unsuccessful attack on the city in 1327 A.D., but it was completely sacked and destroyed by the Mughal Timúr in 1399 A.D. In 1788 A.D. Ghulám Kádir held the fort, which was taken by the Marhattas after a severe struggle. Mr. Guthrie, writing in 1805, says:—"Meerut is a ruinous depopulated town and a place of no trade, the average net market duties for four years amount to only Rs. 2,535." It soon, however, began to recover. The walls are now broken every-where and roads have been put in at all points. In some places the remains of the walls are of brick and in others of mud. In 1806 cantonments were first established at Meerut, and in 1808 Major Penson commenced the erection of cavalry and infantry barracks. Since then the cantonments have sprung up to the north-west of the city, and in 1865 contained 35,194 inhabitants, exclusive of Europeans, and in 1872 the returns show 29,395 inhabitants.

MEERUT, a parganah and tahsíl in the district of the same name, had, according to the census of 1872, an area of 366 square miles and 290 acres, of which 271 square miles and 636 acres were cultivated. The area assessed to Government revenue amounted to 356 square miles and 351 acres, of which 263 square miles and 546 acres were cultivated; of the remainder 53 square miles and 362 acres were returned as unculturable.

Meerut is the central parganah of the district. Its breadth from east to west is about 23 miles, and its extreme length from north to south about 24 miles. It is almost a square and is compact in shape, except the strip running northwards.

Physical characteristics.

The parganah is bounded on the west by the river Hindan. Fringing this is a belt of lowland, varying in breadth from a mile to a mile and a half, and extending from Kalína on the north to Dhaulári on the south. Within the last few years this tract has become quite swampy and water-logged, and much cultivated land has had to be abandoned in consequence. *Reh* has at the same time made its appearance. It is curious that in the similar and similarly situated tract in parganah Sardhana further to the north no such deterioration has taken place. Perhaps the reason is to be sought in the fact that canal irrigation in the Meerut parganah approaches close to the edge of the high lands, while in Sardhana canal irrigation

remains at a greater distance from them. The Káli Nadi traverses the whole length of the parganah from north to south. It passes four miles east of the town of Meerut, and is crossed at Gokalpur on the metalled road to Garhmuktesar by an iron bridge. It is here joined by the Abu or Khodára Nala, which runs throughout this parganah from the village of Chakbandi to its junction with the Káli Nadi. The banks of the nadi are low, and swamps have been formed here, and land also has been thrown out of cultivation. The Chhoiya, a small stream running parallel to the Káli Nadi, may be said roughly to form the eastern boundary of the parganah, dividing it from Kithor. This stream conveys a good deal of water in the rains, but is dry at other seasons. The only other physical feature of importance is a sand ridge which enters the parganah at Pabli, and skirting cantonments on the north-east, proceeds in a south-westerly direction to the Saráwa parganah. This is a continuation of the sand ridge in parganah Sardhana.

Irrigation.

In such an extensive parganah there is of course a great variety of soils, but it may be said that with the exception of the tract which is within the influence of the sand ridge, and the poor sandy soil which fringes the Káli Nadi on either side, there is little bad land in the parganah. Of a total of 168,045 acres 94,699 are a good firm clay, while 60,158 are more or less light in character, and 13,188, or not quite 8 per cent., are actual *bhúr*. The soil is generally of remarkably fine and fertile quality. Water is close to the surface, and kuchcha wells are made at a trifling cost and last well. The Ganges canal passes down the parganah on the west, and the whole tract between the Hindan and the Káli Nadi is more or less completely irrigated from it: 266 maháls out of the 421 in the parganah are returned as receiving water from the canal. But, as in parganah Sardhana and the good parts of Hastinápur, the canal has in a great measure merely superseded the kuchcha wells. Wells water 54,099 acres; canals, 43,819 acres, and jhíls, 3,296 acres, or a total of 101,214 acres. Sugar has always been grown largely in many villages of the parganah, but the opening of the Ganges canal has given an immense impetus to the growth of this plant. No less than 10 per cent. of the whole cultivation is under sugar; seven per cent. is sown with cotton and 31 per cent. with wheat.[1]

Fiscal history.

The general history of the past and present settlements are given under the district notice. From them it will be seen that cultivation has increased 12 per cent. and irrigation 138 per cent., while the proportion of irrigation to cultivation has increased from 28 to 60 per cent. The tenures show 201 zamíndári, 166 bháyachára, and 54 pattidári estates. The transfers have been moderate: 41,117 acres were sold by private sale during the currency of the last settlement; 7,869 acres by auction,

[1] Mr. J. S. Porter in 1867.

and 8,370 acres were temporarily mortgaged. In none of these cases except Játauli, Mamipur, and a few other villages, can the transfer be attributed to the pressure of the assessment. There have been few balances except, nominally during the famine year, and altogether the landowners and cultivators are very well off,—a result to which the rise in prices, the Ganges canal, and an easy assessment have all more or less contributed. Rents and rent-rates are sufficiently indicated in the district notice, and the data on which the assessment was made are given in the parganah reports published by the Board of Revenue. The parganah formerly contained thirteen tappas—Gaija, Siwál, Púthi, Pabli, Patta, Haweli, Rorí, Láwár, Máchara, Sisauli-Mau, Satta, Rasúlpur Rohta, and Sikhera, but these distinctions have now been entirely lost.

The following statement compares the results of the past and present assessments:—

Period of settlement.		Total area.	Barren and revenue-free.	Cultivable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
					Wet.	Dry.	Total.			
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...		235,153	39,689	45,443	42,482	107,533	150,021	195,464	334,557	2 3 8
Present,	Khádir,	5,694	1,974	1,195	417	2,108	2,525	8,720	408,905	2 7 3
	Bángar,	228,836	40,208	24,780	99,557	61,291	163,848	188,628		

Population.

According to the census of 1872 parganah Meerut contained 284 inhabited villages, of which 35 had less than 200 inhabitants; 92 had between 200 and 500; 95 had between 500 and 1,000; 52 had between 1,000 and 2,000; 7 had between 2,000 and 3,000; and two had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants was Meerut itself, with 81,306. The total population in 1872, including the city and cantonments, numbered 274,899 souls (126,793 females), giving 751 to the square mile. Classified according to religion there were 200,742 Hindús, of whom 91,470 were females; 73,818 were Musalmáns, amongst whom 35,154 were females; and 339 were Christians. Distributing the Hindu population amongst the four great classes, the census shows 19,941 Brahmans, of whom 8,850 were females; 9,451 Rajpúts, including 4,092 females; 17,725 Baniyas (8,005 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 153,625 souls, of whom 70,523 are females. The principal Brahman subdivisions found in this parganah are the Gaur (15,565), Saraswat (520), Bhát (114), Dakaut (507), Acháraj (116), Kanaujiya, Gujráti, Sanádh, Chaurasiya, Dasa, Gangaputr, and Rahiya. The Rajpúts belong

to the Chauhán (4,638), Tonwár (2,126), Badgújar, Dhangar, Panwár, Gahlot, Solankhi, and Mohrawár clans, and the Baniyas to the Agarwál (9,620), Saraugi (1,153), Gadariya (3,130), Bishnoi, Bishni, Raja-ki-barádari, Maheshri, Rastaugi, and Rautgi subdivisions. Amongst the other castes the following have more than 1,000 persons each:—Gararíya (2,603), Taga (2,228), Máli (4,870), Jogi (2,116), Koli (4,096), Kahár (6,705), Hajjám (3,339), Barhai (1,871), Sonár (1,676), Ját (24,297), Kumhár (5,703), Chamár (46,640), Bhangi (10,808), Juláha (1,074), Gújar (9,899), Ahír (2,537), Káyath (1,648), Dhobi (1,185), Khatík (2,222), and Lodha (3,940). The following have between 1,000 and 100 members:—Lohár, Bharbhúnja, Gosháin, Bairági, Khattri, Chhípi, Kalál, and Nat. The following show less than 100 members:—Dhúna, Teli, Saisi, Dhanak, Fakír, Kanjar, Malláh, Kúrmi, Bohra, Saini, Rahti, Kamboh, Káchhi Baheliya, &c. Musalmáns are distributed amongst Shaikhs (53,006), Sayyids (2,845), Mughals (955), Patháns (6,515), and the remainder are entered without distinction.

Infirmities.

There were 23 insane persons, 10 idiots, 27 deaf and dumb persons, 536 blind, and 50 lepers in the tahsíl during 1872. The occupation statements show that of the male adults in the population 2,542 were engaged in professions, 18,075 in domestic service, 7,112 in commerce, 30,469 in tilling the soil, 16,715 in the mechanical arts and manufactures, while 17,134 are shown as labourers and 3,059 of no specified occupation. Of the total population 29,058 are shown as landowners, 58,283 as agriculturists, and 187,558 as pursuing avocations other than agriculture. The educational returns for the parganah were also collected at the census of 1872. They show that out of a total of 148,106 males only 4,342, or 2·9 per cent., could read and write, and this too including the population of the city and cantonments—a number so small as to clearly show that in this respect the census statistics cannot be trusted. In 1852 Meerut parganah comprised 368 estates, having an area of 280,037 acres; in 1853 these were reduced to 323 estates, with an area of 241,263 acres.

Occupation.

Education.

MURÁDNAGAR, a large village in parganah Jalálabad and tahsíl Gháziabad of the Meerut district, lies a little more than 18 miles from Meerut. The village comprises the two old villages of Sárna and Murádnagar. The inhabitants of Sárna are exclusively Tagas, and in Murádnagar they are now found in greatest numbers. Murádnagar was founded by Mirza Muhammad Murád, Mughal, about 300 years ago, whose mausoleum still exists near the town. In 1865 the population was 4,263, and in 1872 was 4,769, occupying 1,020 houses. The founder built a brick sarái here, which is now Government property, and a school is carried on in it. The tahsíl was transferred to Gháziabad in 1859. There is a police-station and a post-office here. The Chaukidári Act is in

force in Murádnagar, and in 1873 supported a village police numbering ten men of all grades at an annual cost of Rs. 480. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 541, falling at Re. 0-1-9 per head of the population and Re. 0-11-0 per house assessed (782). The expenditure during the same year was Rs. 433, which was met from the income and a balance of Rs. 59 from the previous year.

MUZAFFARNAGAR SAINI, a station of the Great Trigonometrical Survey, is situated in parganah Hastinápur of the Meerut district, in lat. 29°-2′-21″ and long. 77°-49′-50″, at an elevation of 831·6 feet above the level of the sea. The upper mark-stone of the survey is fixed on a very high mound of ruined and broken bricks, probably the remnants of a ruined redoubt, in the midst of the village of that name, and 5·4 miles north-east of Meerut. The population in 1872 was only 911. Saini was by common report the great gate of Hastinápur, and the base of the mound on which it is built is clearly masonry, above which the layers of brick are still visible.

NILOHA, a village in parganah Hastinápur of the Meerut district, lies at a distance of about 13 miles from the civil station, close to the Bijnaur road. The population in 1865 was 2,434, and in 1872 was 2,840. Eighteen biswás of the village belong to the Landhaura estate and two biswas to the Játs. The name of the village in which Niloha is situated is Bhaisa, on the Anúpshahr branch of the Ganges canal. Niloha was founded by a Ját named Nihál, who emigrated from Salárpur, where a mound or khera now marks the site of the original village. In the month of Sáwan a fair is held here in honour of Goga Pír. The market day is Sunday.

NIRPURA, a large village in parganah Barnáwa and tahsíl Sardhana of the Meerut district, is distant 25 miles from Meerut. In 1865 the population was 4,657, and in 1872 was 4,995, principally Játs and weavers. It is noted for the good blankets made there. There is a fair held every year called the Mela Chári Khwájah Ajmer.

NIWÁRI, a village in parganah Jalálabad, with 3,503 inhabitants, is distant 13 miles from Meerut. It has a police-station.

NIZÁMPUR, a village of parganah Hápur of the Meerut district, is distant 20 miles from Meerut. The population in 1872 was 243. There is an outpost of police here.

PARÍCHHATGARH, a town in parganah Kithor and tahsíl Mawána of the Meerut district, lies half way between Mawána and Kithor, at a distance of 14 miles from Meerut on the road to the Kumruddínnagar ghát on the Ganges. The population in 1865 was 4,894, and in 1872 was 4,810, chiefly Tagas, Baniyas, and Brahmans, occupying 1,003 houses. The greater part of the site is well raised and drains into a large excavation to the south, and others to the east and north. On the highest point in the centre of the town are the brick fort

of the former Raja Nain Singh, and adjoining it his family residence, both of which are still in good repair. The fort claims a hoary antiquity. Tradition ascribes its building to Parikhsit, the grandson of the Pándava Arjuna, who was also the founder of the town, in consequence of which the name *kila* or 'fort' is often given to the town to the present day. The fort remained untenanted until the rise of the Gújar power in the last century, when Raja Nain Singh repaired and strengthened it, substituting sun-dried bricks for burnt-bricks, so that the restoration can easily be traced. The fort was dismantled in 1857 and is now used as a police-station. The *chaupál* on one side of the residence of the Raja has been utilised as a school. The houses of the people, chiefly of mud, with a few of brick, congregate around the fort; the Baniya and trading quarter lies to the west, and the quarter of the Chamárs and sweepers to the east. From the school a paved street runs to the south of the town, and towards the centre of this street another street turns off to the bazar on the west. The bazar contains many fair shops, some double-storeyed, and altogether presenting a more prosperous appearance than one could expect in a town of this kind. The water in the wells is good and the public health is excellent. A market, much frequented by the people of the neighbouring villages, is held every Monday. The water of the Newaldeo well near the Raja's residence is much praised: it is said to have been built in the time of the Pándavas, and is drunk by people from all parts as a specific for leprosy. In the early days of British rule Parichhatgarh was the head-quarters of a tahsíl establishment. The Anúpshahr branch of the Ganges canal runs close to the town and irrigates a portion of the town land. There are falls on the canal here, and a canal bungalow, a district post-office, and a police-station. The Chaukidári Act is in force in the town, and in 1873 supported a village police numbering eight men of all grades at an annual cost of Rs. 522. This is met from a house-tax, which in 1872-73 yielded a revenue of Rs. 899, falling at Re. 0-2-11 per head of the population and Re. 0-15-5 per house assessed (930). The expenditure during the same year was Rs. 1,025, which was met from the income and a balance of Rs. 235 from the previous year. A small sum has been expended in works of improvement and in conservancy.

The site.

PATPARGANJ is an old village in parganah Loni and tahsíl Ghaziabad of the Meerut district, about a mile from the Jumna and 31 miles from Meerut. About three-quarters of a mile from the village site is the spot marked out by a surrounding ditch, where in 1803 the battle of Dehli was won by Lord Lake against the Marhattas, commanded by Bourquien, a French adventurer. There is a monument on the spot to the memory of Colonel Sanguine and others who fell. The Chaukidári Act is in force in Patparganj, and in 1873 supported a village police numbering two men at an annual cost of Rs. 96. This is met

from a house-tax, which in 1872-73 yielded a revenue of Rs. 160, falling at Re. 0-2-5 per head of the population and Re. 0-10-2 per house assessed (250). The expenditure during the same year was Rs. 148, which was met from the income and a balance of Rs. 16 from the previous year. The population in 1872 was 1,036, occupying 251 houses.

PHALAUDA, a town in the Mawána tahsíl of the Meerut district, is distant 17 miles from Meerut. The population in 1865 was 4,700, and in 1872 was 4,697, composed of Baniyas, Mírs (Musalmáns), Bishnois (46 houses), &c. It is said to have been founded by Phalgu, Rajpút of the Tonwár or Tuár clan, and his descendants were in possession of the village up to the time of the advent of the Musalmáns. The story runs, that in times past a Musalmán named Mír Surkh, a native of Mazendaran, came with a body of freebooters and desired to settle in Phalauda village. They were afraid of the Rajpúts and resolved, if possible, to get rid of them. A Brahman was bribed by Mír Surkh, who was induced to explain all the usages of the Rajpúts. Mír Surkh then withdrew and awaited his opportunity till the Rajpúts went to Batnaur, on the then stream of the Ganges, to bathe on the last day of the month (*puranmáshi*) of Kárttik. Mír Surkh then got numberless pálkis or palanquins, armed his men, closed the doors, and had them transported to Batnaur as native ladies. On arriving there the Phalauda Rajpúts were in the water unarmed. The pálki doors were then thrown open and Mír Surkh's men went armed into the water and put all the Rajpúts to death. He then seized on Phalauda and other villages, and incorporating with them his former villages constituted all (45 in number) the tappa of Láwár. To this day the zamíndárs of Phalauda are Mírs. At Phalauda is the dargáh of Kutb Sháh fakír, where an *urs* or religious fair is held every year. Kutb Sháh was the son of Daulat Khán, an Amil stationed under the Dehli Government at Phalauda, and being born during the fast month of Ramazán refused to be suckled. It was considered to be a sign that the boy would attain to great distinction, and on his growing up this was fulfilled by his becoming a fakír and a great miracle worker. The people of Nagla Katár, a neighbouring village, mostly Mírs, wished to destroy Kutb Sháh's power, and for that purpose invited him to a feast where a roasted cat was served up. Kutb Sháh instantly detected the treachery and restored the cat to life and cursed the people of the village. The people were in consequence visited with sickness and the village went to ruin. For nearly two centuries nobody cultivated the village, nor in 1836 could the Settlement Officer (Mr. Elliot) induce anybody to undertake its cultivation. After that some Játs occupied it at a progressive revenue of Rs. 30. The village is now again in a high state of cultivation, and at the last settlement a land-revenue of Rs. 990 was assessed. No Musalmán will now live in the village, for they say they immediately become sick. The

History.

area of Phalauda is 2,769 acres. There is a vernacular school here and a market on Sundays. There are numerous bághs or groves of mango trees. The streets are narrow and dirty.

PHAPHÚNDA, a small village in parganah Meerut of the Meerut district, is distant six miles from Meerut. The population in 1872 was only 1,961. It has a police-station.

PILKHUA or Pilkhuwa, also known as Bádsháhpur, a town in parganah Dásna and tahsíl Gháziabad of the Meerut district, is distant a little over 19 miles from Meerut. The population in 1865 was 4,065, and in 1872 was 6,239, of whom 5,572 were Hindús (2,605 females) and 659 were Musalmáns (303 females). The inhabitants are for the most part Mahájans, Rajpúts, Brahmans, and Chamárs. Except towards the centre, the site of Pilkhua is low, and is connected with the Dehli and Hápur road by a raised and bridged [illegible] forming a tank called the west is a large [illegible] Kankhali; to the south-east a second, used by the Chamárs in their trade; and close to the Dehli road a new tank is being made by a Baniya narrow lane running from east to west of Sikhara. The principal bazarway runs from north to south from as far as the Kankhali tank. There are about 250 shops in the town, nearly all of which are built of mud. There are about ten bankers and there are two large Hindu temples. The population is a Hindu manufacturing one, aud there are very few Musalmáns. Water in the wells was found at 20 feet from the surface in 1872, but in 1874 it had risen to 10 feet. The drainage throughout is imperfect, and much stagnant water collects—a fruitful source of fever and spleen. Indeed, the mortality from fever has been excessive for several years, and in 1874 amounted to 78·2 per thousand of the population. Since the establishment of the muncipality, however, much improvement has been effected. The market-place has been raised and metalled and a good entrance to the town from the highroad has been provided. Arrangements have been made to dispose of the overflow from the great water-hole on the west, and a drain has been excavated from the eastern margin of the town in the direction of a small tributary of the Káli, which passes about four miles to the east of the site, and to which a canal escape, now apparently unused, passes just south of Pilkhua. The lands around are partly irrigated from the canal; and distributaries, which impede the outflow of rainfall, exist on all sides of the town, but at a considerable distance from it. There is still much to be done in improving the drainage of the town in the direction of preventing the stagnation of water in the excavations around, before the causes of the great fever mortality in the autumn months can be removed.

The site.

In 1872 a municipality was established here, the affairs of which are managed by a committee, of whom three are officials and six are elected by the tax-payers.

Municipality.

The following statement shows the income and expenditure of the municipality for four months of 1872-73 and the entire years 1873-74 and 1874-75:—

Receipts.	1872-73.	1873-74.	1874-75.	Expenditure.	1872-73.	1873-74.	1874-75.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Opening balance, ...	3,344	3,777	1,459	Collection, ...	230	518	611
Class I.—Food and drink.	730	1,727	1,627	Head office, ...	...	36	36
„ II.—Animals for slaughter.	2	7	6	*a.* Original works, ...	...	946	1,861
				b. Supervision, ...	30	180	...
				c. Repairs, &c., ...	...	2,567	...
„ III.—Fuel, &c. ...	36	178	166	Police, ...	291	895	768
„ IV.—Building materials.	15	41	42	Education, ...	30	172	174
				Conservancy, ...	72	365	461
„ V.—Drugs, spices,	69	107	103	Miscellaneous, ...	88	40	65
„ VI.—Tobacco, ...	6	25	28	Charitable grants, ...	...	52	130
„ VII.—Textile fabrics.	256	865	487	Pounds, ...	7	...	...
Total of octroi, ...	1,124	2,337	1,225				
Rents, ...	47	181	212				
Fines, ...	5	84	41				
Pounds, ...	4	63	107				
Miscellaneous, ...	...	137	..				
Total, ...	4,524	7,229	4,303	Total, ...	748	5,771	4,106

Statement showing import of taxable articles for two years Pilkhua.

Articles.	*Net imports in*				*Consumption per head in*			
	1873-74.		1874-75.		1873-74.		1874-75.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity	Value.
	Mds.	Rs.	Mds.	Rs.	Mds. s. c	Rs. a. p.	Mds. s. c.	Rs. a. p.
Grain, ...	27,312	...	25,667	...	4 16 5	..	4 5 11	...
Sugar refined, ...	3	...	3	...	...	...	0 0 1	...
Ditto unrefined, ...	4,613	...	3,878	...	0 29 9	...	0 24 7	...
Ghi. ...	188	...	212	...	0 1 3	...	0 1 6	...
Other articles of food, ...	6,051	160	4,717	200	...	...	...	...
Animals for slaughter, ...	109 No	...	96 No	...	...	...	...	...
Oil and oil-seeds, ...	797	...	939	...	0 5 2	...	0 6 4	...
Fuel, &c , ...	5,004	...	4,199	...	...	...	...	...
Building materials, ...	...	2,206	...	1,970	...	...	...	0 5 2
Drugs and spices, ...	...	5,360	...	5,040	...	0 13 9	...	0 13 0
Tobacco, ...	292	...	308	...	0 2 0	...	0 2 0	...
European and Native cloth,	...	57,451	...	46,538	...	8 5 3	...	7 0 0
Metals, ...	236	...	151	...	0 1 9	...	0 1 0	...

Manufactures.

About one hundred looms are worked in the town, and there is a considerable export of coarse cloth. *Chuneris*, a kind of thin cloth dyed in an elaborate manner with spots, are also made for the Dehli market. There is a very large trade in leather and shoe-making. The shoes of Pilkhua find their way to Calcutta and Bombay, and the Chamár shoe-makers are especially skilful in the mode in which they dye the buff

and red ornamental portions of their shoes. The green leather is imported from Dehli, where it is made by the Musalmán leather-workers. Mr. Michel of the Masúri factory purchased Pilkhua and the thirteen neighbouring villages after the mutiny. He is now the landlord and a member of the municipal committee. There is a mud-built police-station and post-office, and two saráis. The school is of masonry and is attended by about 35 pupils. The market-day is Friday.

PÚTH, a parganah in tahsíl Hápur of the Meerut district, is situated in the extreme south-eastern corner of the district. It is bounded on the north-east by the Ganges, on the south by the Bulandshahr district, and on the north-west by Garhmuktesar. According to the census of 1872 it then comprised a total area amounting to 64 square miles and 341 acres, of which 37 square miles and 396 acres were cultivated. The area assessed to Government revenue in the same year stood at 63 square miles and 385 acres, of which 36 square miles and 474 acres were cultivated and 13 square miles and 90 returned as uncultivable.

Condition of the parganah.

There is a large river frontage in this parganah, and in half this area there is a considerable proportion of *khádir* or land lying in the river-bed. Two villages lie wholly within the *khádir* and portions of thirteen others. The portions lying nearest the uplands are fertile and produce good crops of sugar-cane and rice, while those lying on the high bank itself contain some of the poorest land in the district, being much cut up by ravines, and so situated that irrigation is impossible. Another characteristic of the parganah is the existence of sand-drifts or dunes, which, though in many cases fixed, are in others still moving, thus causing sudden and great changes in the distribution of the soils. By the side of a fertile estate with good irrigation may be seen another without any irrigation whatsoever, and with a sandwhelmed soil capable of producing only scanty crops of the poorest kinds. Mr. Porter, in his report, calls attention to the rapidly increasing area occupied by ravines in this parganah, and shows that this ravine area is admirably adapted for the plantation of gardens and fuel reserves. The water-shed drained by these ravines is usually very small, seldom exceeding one square mile in extent. If light embankments were formed around the fields above the head of the ravine, and the ravine itself were divided into plots by small embankments thrown across the narrowest parts of its bed, each field and each plot would absorb its own share of the rainfall, and the plots would at once be ready for ploughing and sowing with *kíkar*, *sisu*, and other timber trees. At present the population, including landowners and cultivators, belong to the least industrious classes in the district, so that wild-pig jungle largely predominates amongst the cultivation. There are instances in the district where this raviny land has been terraced by the Játs, and the richest crops are flourishing on what the Pathán of Púth would call barren waste. Again, the Gújars are interested in the preservation of the waste as affording good pasture-land for their cattle. With the exception of these

khádir and sandy tracts, the land lying in the interior of the parganah is of fair quality, whilst a few villages are extremely rich.

Irrigation from canals has only recently reached the parganah and is limited in extent, while well-irrigation is not always practicable. The capabilities for wells are confined to a narrow belt, commencing on the southern frontier, and running direct through the centre of the parganah with masonry wells having water at 30 to 35 feet in the beginning, and ending with *kuchcha* wells with water at 10 to 15 feet. Except a few villages to the south-east, the remainder have very little well-irrigation capability, and some have absolutely none. Of the 54 estates in the parganah, nine are pattidári, two are bháyachára, and 43 are zamindári. Thirty estates are held by Játs with portions of 12 others, four by Rajpúts, and the remainder chiefly by Musalmáns. The Ját holdings are represented by the estates of [illegible] is one of the least improving landlords in the parganah. Owing to continued litigation and [illegible]nagement his estates have deteriorated, and there is little hope for improvement under [illegible]present incumbent. There are few Ját cultivators, and the Patháns, from their natural indolence, pride, and extravagance, make as bad cultivators as they are bad landholders. Irrigation has doubled during the currency of the last settlement, but still covers only about one-fifth of the cultivated area, and cultivation has only increased one-fifth. Transfers have amounted to 43 per cent., of which 32 per cent. were by private sale, five by forced sale, and six by mortgage. As a whole, this parganah, though the poorest in the district, is not so flourishing as it might be in the hands of more improving proprietors. Sir H. Elliot, in his Púth report, said "that his arrangements were made with a view of rendering these transfers less frequent, and he trusted that the timely reduction made to some of the landholders would save their property from the grasp of the Kuchchesar Raja;" but in this respect his efforts have been unsuccessful. The cultivating classes comprise Patháns, Chauháns, Rajpúts, Brahmans, a few Játs, Gújars, and Chamárs. Payment of rent in kind, a sign and cause of inferority of produce, prevails. The Kuchchesar villages are usually farmed, and here cash rents frequently obtain. The irrigation details show 273 wells (67 pukka) worked by 358 runs for irrigation purposes and watering 3,169 acres; 275 acres were irrigated from tanks and 1,502 acres from the canal, leaving an unirrigated area of 19,133 acres. The settlement statistics, past and present, are as follows:—

Settlements.

Period of settlement.	Total area.	Barren and revenue-free.	Cultivable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...	37,103	6,626	9,646	2,043	18,788	20,831	30,477	40,196	1 14 10
Present, ...	41,282	8,350	8,853	4,946	19,133	24,079	32,932	41,225	1 11 4

Population.

The census papers of 1872 show that there were then in the parganah 45 inhabited villages, of which 13 had a population under 200 souls; 15 had between 200 and 500; 10 had between 500 and 1,000; 6 had between 1,000 and 2,000, and one had between 2,000 and 3,000. The land-revenue from all sources during the same year amounted to Rs. 40,052 (or with cesses Rs. 44,133), which fell on the total area at 15 annas 6 pies per acre, on the area assessed to Government revenue at 15 annas 9 pies, and on the cultivated area Re. 1-10-7. The total population in 1872 numbered 24,196 souls (11,431 females), giving 372 to the square mile. Classified according to religion there were 19,399 Hindús, of whom 9,056 were females, and 4,797 Musalmáns, amongst whom 2,375 were females. Distributing the Hindu population amongst the four great classes, the census shows 1,921 Brahmans, of whom 917 were females; 5,249 Rajpúts, including 2,323 females; 801 Baniyas (379 females); whilst the great mass of the population is included in [illegible] of the census returns, which show a total of 11,428 souls, of whom 5,437 are females. The principal Brahman subdivisions found in this parganah are the Gaur (1,741), Bhát, Dakaut (41), Acháraj (61), and Sarasút. The Rajpúts belong to the Chauhán (3,312), Tonwár (1,267), Badgújar, Ponwár, Jádon, Rána and Solankhi clans, and the Baniyas to the Agarwál (779) and Gadariya subdivisions. The other castes comprising more than one thousand persons each are the Chamár (3,877) and Lodha (1,285) castes. The following have less than one thousand members each:—Máli, Koli, Jogi, Gararíya, Kahár, Hajjám, Barhai, Sonár, Ját, Kumhár, Bharbhúnja, Dhúna, Bhangi, Gújar, Gosháin, Ahír, Bairági, Káyath, Kalál, Nat, Khatík, Baheliya, Malláh, Orh, Ghosi, and Khági. Musalmáns are shown under Shaikhs (3,239), Patháns (1,076), Mughals (3), and Sayyids (172): the remainder are unspecified.

Occupations.

The census statistics show the occupations of all the male adults in the district. For this parganah we find 210 engaged in professions; 758 in domestic service; 1,752 in commerce; 3,838 in cultivating the soil; 1,063 in the arts and mechanical occupations and manufactures, and 174 are returned as of no specified occupation. For the total population of the parganah the same statistics give 764 as landholders, 10,666 as cultivators, and 12,766 as engaged in avocations unconnected with agriculture. The educational statistics show only 442 out of a male population numbering 12,765 souls as able to read and write. In 1819 Púth-Sayána, Thána Farída and Ahár Malakpur formed a tahsíl known as Púth-Sayána. Thána Farída and Ahár Malakpur were transferred to Bulandshahr in 1824. In 1844 Púth was separated from Sayána and attached to the Hápur tahsíl, and Sayána was transferred to Bulandshahr. One village was added to it in 1853.

PÚTH, a small village in the parganah of the same name and tahsíl of Hápur in the Meerut district, lies about 34 miles from Meerut. In 1865 the population

was 688, and in 1872 was 692. Púth is said to have contained the favourite garden of the Hastináp ur Rajas, by whom it was called *pushpavati*. The Musalmáns have the credit of changing the name to Púth. There is a ferry and a second-class police-station here.[1]

PÚTHI, a town in parganah Kithor and tahsíl Mawána of the Meerut district, is distant about 16 miles from Meerut. The population in 1865 was 2,010, and in 1872 was 2,478, comprising chiefly, Gújars and Tagas. It formed a part of Nain Singh's jágír, and *malikána* (or proprietor's allowance) is still paid to his family.

SALÁWA is an old village in tahsíl Sardhana of the Meerut district, about 20 miles from Meerut. In 1872 the population was 3,242. It is situated on the canal, and boasts of a regular bazar with attendant *chaukráyat* or head-beadle. The agriculturists are mostly Rajpúts, but there are also Játs and Jain Baniyas.

[illegible] of the Great Trigonometrical Survey, is situated in parganah Sardhana of the Meerut district, in lat. 29° 9′-58″ and long. 77°-33′-48,″ at an elevation of 819·8 feet above the level of the sea. The upper mark-stone of the survey is situated 5·9 miles north-west of Sardhana, 1·5 south-south-west of the village of Chhúr, 0·7 north-north-east of Gotka; and 1·6 miles east of Bapársi village.

SARÁWA, a town in the parganah of the same name and tahsíl Háp ur in the Meerut district, is situated about 13 miles from Meerut. The population in 1865 was 3,713, and in 1871 was 4,163. This town was in 1737 A.D. the Diwánkhána and Tawíla of Raja Dilarám, a follower of Najíb-ud-daula, Rohilla. The son of Raja Dilarám received another jágír at Ahmadgarh in Baran (Bulandshahr) from Muhammad Sháh, on which he left Saráwa, and after this the place lost its importance. The village was founded in the time of the Ghori line of kings and was then called Fatehgarh. The name was subsequently changed to Saráwa when the Tagas got possession of it. The word 'sirái' means 'cultivator,' and when the Taga cultivators made it their own they called it Saráwa, or the cultivators' own village. The inhabitants are Tagas (Musalmáns), Shaikhs and Sayyids. There are two kheras near the village site, named Kharkáli and Jalálpur. There is also an old khera near the village of Atrára in this parganah, called Kithauli, and another at Badnauli.

SARÁWA, a parganah in tahsíl Háp ur of the Meerut district, is situated in the centre of the district, a little to the south of Meerut. According to the census of 1872 the total area, then, comprised 76 square miles and 220 acres, of which 56 square miles and 274 acres were cultivated. The area assessed to

[1] The net revenue from the ferry was:—

	Rs.		Rs.		Rs.		Rs.		Rs.
1861-62	581	1863-64	2,025	1865-66	1,750	1867-68	1,595	1869-70	3,100
1862-63	178	1864-65	1,090	1866-67	1,750	1868-69	1,750	1870-71	3,050

Government revenue amounted to 73 square miles and 617 acres, and of this only seven square miles and 413 acres were returned as unculturable.

Saráwa is a small parganah drained on the east and west by two branches of the Káli Nadi, which are almost altogether dry during the hot season, and are used as escapes for the canal, but are scarcely of any service for irrigation. Along the lines of these channels lie the ridges of sand-dunes, throwing out lateral spurs in all directions and causing much diversity in the character of the soils. The general fiscal history of the past and present settlements has already been given in the district notice, as well as that relating to rent-rates and other subjects connected with the economical history of the tract. Here, as in Hápur, the drainage channels cut off the parganah from canal irrigation. At the time of settlement the area irrigated from canals was only 719 acres, while wells watered 15,328 acres and tanks 681 acres. The water is throughout at no great depth from the surface, and the soil, except in the sandy tracts, is firm enough to admit of wells being sunk: and that this has been taken advantage of is shown by the fact that irrigation has increased from 9,766 acres to 16,728 acres in thirty years. The population, both landowners and cultivators, are chiefly Tagas, there being only fourteen villages in which they have no footing. They are not an industrious class; still, owing to the lightness of the assessment, no balances occurred during the currency of the last settlement, and in only one unimportant village was a remission of revenue necessary on account of the drought of 1860-61. The transfers of all kinds have amounted to 32 per cent. of the total area, but these are not excessive when the character of the mass of the cultivating community is considered.

Physical features.

The following statement compares the former and present assessments in this parganah :—

Period of settlement.	Total area.	Barren and revenue-free.	Cultivable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rate on cultivated area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Former, ...	48,367	7,509	11,035	9,766	20,057	29,823	40,858	52,552	1 12 2
Present, ...	48,860	4,990	7,756	16,728	19,386	36,114	43,870	60,850	1 10 11

According to the census of 1872 there were 50 inhabited villages in this parganah, of which 13 had a population under 200; 14 had between 200 and 500; 14 had between 500 and 1,000; five had between 1,000 and 2,000; one had between 2,000 and 3,000, and three had more than 3,000. The land-revenue from all sources during the same year amounted to Rs. 60,905 (or with cesses Rs. 67,201), which fell on

Population.

the total area at Rs. 1-3-11 per acre, on the area assessed to Government revenue at Rs. 1-4-7 per acre, and on the cultivated area at Rs. 1-11-0. The total population in 1872 numbered 37,255 souls (17,853 females), giving 490 to the square mile. Classified according to religion there were 27,077 Hindus, of whom 12,817 were females, and 10,178 Musalmáns, amongst whom 5,036 were females. Distributing the Hindu population amongst the four great classes, the census shows 3,176 Brahmans, of whom 1,536 were females; 745 Rajpúts, including 341 females; 1,039 Baniyas (474 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 22,117 souls, of whom 10,466 are females. The [illegible] Brahman subdivisions found in this parganah are the Gaur (2,764), [illegible] and Acháraj (129). The Rajpúts belong to [illegible] Chauhán [illegible] clans, and the Baniyas to the [illegible] the following show more than [illegible] Chamár 8,559), Bhangi (1,324), and Gújar (2,000) [illegible] persons in each:—Máli, Jogi, Koli, Gararíya, Kahár, Hajjam, Barhai, [illegible], Kumhár, Bharbhúnja, Dhúna, Gosháin, Bairági, Khattri, Chhípi, Kalál, Lodhá, Khatík, Teli and Baheliya. The Musalmáns are classified as Shaikhs (8,256), Patháns (223), Sayyids (161), and Mughals (46): the remainder are unspecified.

Occupations.

The occupations of the people, as shown by the census of 1872, give 322 male adults employed in professional occupations; 1,217 in domestic service; 593 in commerce; 5,868 in agriculture; 1,697 in the mechanical arts and manufactures; 1,784 were returned as labourers, and 321 had no specified occupation. The total population during the same year was divided into landowners, who numbered 4,945; cultivators 11,841, and persons pursuing avocations unconnected with the cultivation of the soil, 20,469 souls. The educational statistics show only 852 males as able to read and write out of a population numbering 19,402 males. These figures must be rejected as untrustworthy. Saráwa contained the tappas of Bhojpur, Kharkoda, Kithor, and Ajrára in the *dastúr* of Meerut and *chakla* of Sikandarabad. In 1809, Ajrára, Saráwa, Bhojpur, and Jalálabad formed one tahsíl which, in 1819, was transferred to Hápur with Garhmuktesar. One village was added in 1853.

SARDHANA, the chief town of the parganah and tahsíl of the same name in the Meerut district, is situated about twelve miles from Meerut. The population in 1847 was returned at 12,481, in 1853 at 13,760, and in 1865 at 13,072. The census of 1872 shows only 12,466 inhabitants, of whom 6,471 were Hindús (2,994 females); 5,641 were Musalmáns (2,817 females), and 354 were Christians (147 females). The difference between the enumeration of 1865 and 1872 is chiefly due to the non-inclusion of outlying hamlets in the town

census, and its decay since the death of Begam Sumru. The site has an area of 168 square acres, giving 74 souls to the acre. Distributing the population amongst the rural and urban classes, the returns show 534 landholders, 605 cultivators, and 11,327 persons pursuing occupations unconnected with agriculture. The number of enclosures in 1872 was 1,686, of which 852 were occupied by Musalmáns and 29 by Christians. The number of houses during the same year was 2,991, of which 623 were built with skilled labour, and of these 116 were occupied by Musalmáns and 13 by Christians. Of the 2,368 mud huts in the town, 1,145 were owned by Musalmáns and 71 by Christians. The chaukidári returns give 4,144 houses. Taking the male adult population (not less than fifteen years of age), we find the following occupations pursued by more than 40 adult males:—Barbers (95), beggars (71), butchers (109), carpenters (47), cultivators (304), goldsmiths (55), grain-dealers (43), green-grocers (81), labourers (763), landowners (244), cloth-sellers (89), oil-makers (58), money-lenders (48), potters (53), servants (643), shop-keepers (173), shoemakers (53), sweepers (85), tailors (120), water-carriers (57), and weavers (253). The Saraugís are the principal residents. The family of the Afghán pensioner Ján Fishán Khán also reside here.

The site.

The site is low throughout, in a country covered with canal irrigation and abounding in shallow depressions which imperfectly fulfil the duty of drainage lines. To the north is Lashkarganj and the old fort of Begam Sumru, next comes a considerable plain, and then the town itself. There are five muhallas, one of which is Lashkarganj, founded by the Begam as the head camp for her troops, for whom the plain between it and the town formed the parade-ground. To the south-east of the town there appear to be the remains of some rude attempts at a fortification. Traces of a low ditch still remain, and the entrance way crosses this ditch by a low embankment, and winds, as if for the purpose of defence, by a tortuous lane to the Begam's *kothi*. From thence it turns, at right angles, westward towards the centre of the town and forms the principal road. This main street, as well as the side lanes, is low, broken and unmade, and exhibits in places the remains of a brick pavement. To the west there are a few good masonry houses, but, as a rule, the shops are poor and many of the houses are partly in ruins. A metalled road joins the town to Lashkarganj, which forms the market-place. Its two principal streets are laid out at right angles to each other, and at the point of intersection is a circular space known as the chauk. These roads are as yet unmetalled and are lined by poor looking shops. Altogether the town has a poor and decayed appearance. The depth, from the surface, of the water in wells has risen from twenty feet to ten feet since the introduction of canal irrigation and fevers and spleen enlargement are common. A drainage line has been excavated from the south of the town to Nánu, whence it turns

westward and enters the Hindan at Kalína, a distance of nine miles. A second line of drainage collects to the south-east and enters the Khodára nála, a tributary of the East Káli Nadi, near Bajhera, whilst to the north-east the Alipur line of drainage enters the same nála near Pábli. The evil effects of oversaturation are exaggerated by the existence of excavations both on the plain beyond the town, in the ditch to the south-east of the town and amid the houses on the south, where there is a hollow covering eight bighas of land. Some efforts have recently been made towards levelling these places and cleaning the drainage cut towards the Hindan, and to this object much of the local funds is applied. The town is essentially an agricultural one and has little or no trade. A market is held in Lashkarganj every Friday.

Local institutions.

The Chaukidári Act is in force in Sardhana, and in 1873 supported a village police numbering 44 men of all grades at an annual cost of Rs. 2,676. This is met from a house-tax which in 1872-73 yielded a revenue of Rs. 5,991, falling at Re. 0-6-2 per head of the population and Rs. 1-13-2 per house assessed (2,590). The expenditure during the same year was Rs. 5,887 which was met from the income and a balance of Rs. 2,074 from the previous year. The tahsíli building is square and fairly kept, and within it are the police-station and post-office. Close to it is a Christian village and within the town are schools. The old fort of the Begam in Lashkarganj is in ruins, and within it presents the appearance of a mud-built village with interstices of cultivation which are gradually encroaching upon the entire area. The Begam's residence or *kothi* on the east side of the town. It is a fine modern house with a grand flight of steps at the entrance and extensive grounds. It is well kept and in good repair and well furnished, containing some fairly executed pictures. It was built in 1834 and is commonly known as the *kothi* Dilkusha. The Roman Catholic Cathedral, built in 1822, and St. John's College are both outside the town on the south. The former is a rather imposing building standing within a remarkably large enclosure surrounded by a fine ornamental wall. The college is a low masonry house which was once the Begam's own place of residence. The college is intended for the instruction of native priests and is supported from an endowment made by the Begam. The Saraugis have four temples; two of which, known as Lálji Rám ke and the Chakrawála, are fine buildings. Local tradition assigns the founding of Sardhana to one Raja Sarkat. His family ruled until the arrival of the Musalmáns, when all of them were expelled. After a time the place became the property of Dhusar and Bishnoi Mahájans, who, in their turn, were expelled by Tagas during the troubles of the last century. These latter continue still in possession. The ruins of another building of the Begam still exist at Khirwa Jalálpur.

SARDHANA, a parganah in tahsíl Sardhana of the Meerut district, is bounded on the north by the Muzaffarnagar district; on the south and east by parganah

Meerut, and on the west by parganah Barnáwa. Sardhana is also the head-quarters of the tahsíl of the same name. In 1872 the area comprised 137 square miles and 251 acres, of which 105 square miles and 443 acres were cultivated. Of the area assessed to Government revenue, 105 square miles and 400 acres were cultivated, 11 square miles and 408 acres were culturable, and 20 square miles and 40 acres were barren.

Condition of the parganah.

The West Káli and Hindan rivers unite below the village of Pitlokar in this parganah. The soil is of excellent quality, consisting of a deep dark loam, producing fine crops of the best kind. To the north and east there is a sand ridge which, entering at Sardhana, proceeds in a south-easterly direction to Khirwa, and on the north-west corner adjoining the Káli are a few bad villages showing much ravine land in their areas. The Hindan *khádir*, though inclined to sand, is fertile and yields good crops. Water is close to the surface and *kuchcha* wells are generally easily made and last several years; but the canal while supplying much of the water has had the effect of destroying and supplanting the well-irrigation, which was always a characteristic of this tract. Mr. Porter thinks that the advantages derived from the canals are more than balanced by the injury caused to the wells and the uncertainty of the water-supply; so that on the whole, with the exception of the tracts to the north and east, the parganah has gained little from the canal. In some cases, particular villages have sustained considerable loss from the obstruction to the natural drainage caused by the canal embankments and some of the distributary channels. It is, however, right to observe that measures have been taken to remedy this evil by the excavation of drainage cuts and the clearing and realignment of the existing lines. Irrigation has increased from 35·9 per cent. of the cultivated area to 62·4 per cent., whilst cultivation has also increased by 29·2 per cent. The irrigation from wells amounts to 19,496 acres; from canals 20,914 acres, and from tanks 979 acres: whilst 8,687 acres still await the plough, of which 3,147 acres are situated in the Hindan *khádir*.

The Sumru estates.

The past and present fiscal history and other matters relating to the economical history of this tract have been given in the district notice, but here it will be well to give some account of the state of the Sumru parganahs as a whole, and their first settlement. The portions of the Sumru estates included in the Meerut district on its lapse in 1835, comprised parganahs Sardhana, Budhána, Baraut, Kutána and Barnáwa, and two other villages. Of these, parganah Budhána was subsequently transferred to the Muzaffarnagar district. The net demand of all these parganahs for twenty years (1814—1834 A.D.) averaged Rs. 5,86,650, including cesses, while the collections during the same period averaged Rs. 5,67,211 with balances, amounting on the whole to only Rs. 19,439. The mode of settlement adopted by the

Begam was that calculated to extract the very last anna that a cultivator could pay. The village rent-rolls were framed on money rates for produce graduated to the caste of the cultivators, of whom the Játs held the first rank. As compared with the neighbouring British district of Meerut, the rates per *pukka* bígha for sugarcane ranged from Rs. 6-9 to Rs. 9 as the lowest, to from Rs. 10 to Rs. 15 as the highest, while in Meerut they were Rs. 3 to Rs. 4½ for the lowest, and Rs. 9 to Rs. 12 for the highest. An allowance of from 2½ to 12 per cent. was made as *nankár*, but to the regular revenue were added cesses (*abwáb*), one of which was fluctuating according to the amount of the land-revenue, on which it amounted to seven per cent., and the other fixed, intended as a commutation for *bhet*, *nazarána*, and other presents to tax-collectors, which the Begam professed to reimburse them for. To these items were added balances of *takkávi* and arrears, all of which together formed the debit side of the accounts of each village to which the collections were credited.[1]

Actual collections.

In realizing the revenue the *takkávi* advances were first recovered with interest at 25 per cent. per annum, then a second deduction at Rs. 7-5 per cent. was made for *batta* or loss in exchange on inferior rupees, which was continued, even when full-weight rupees were current. Taking the average rent-roll for 20 years at Rs. 5,49,847 the sum of Rs. 34,744 was allowed as *nankár*, leaving Rs. 5,15,103, to which must be added Rs. 34,054 as cesses making a total demand of Rs. 5,49,157. The collections amounted to Rs. 5,29,718, or with *batta* Rs. 5,67,211. That there was such a small arrear as Rs. 19,439 through such a long series of years is due to the fact that sugarcane, the principal crop, was grown on a system of *takkávi* or advances. These the cultivator was forced to accept, and the collectors inspected the villages each year, and obliged each one to till as much land as his means would allow. Lumberdárs, or head-men of villages, were also allowed to levy a fee amounting to twelve per cent. on the revenue. In good villages sugarcane land was rated in the village *báchh* at Rs. 18 the *pukka* bígha, and many villages paid as high as ten rupees per acre on the cultivated area, so that many villages were obliged to eke out their revenue by taxing trades, hiring carts and the like. In fact the cultivators were only left sufficient to keep body and soul together. Mr. Plowden writes :—"The rule seems to have been fully recognized and acted up to by the Begam which declared that, according to Muhammadan law 'there shall be left for every man who cultivates his lands as much as he requires for his own support, till the next crop be reaped, and that of his family and for seed. This much shall be left to him ; what remains is land-tax and shall go to the public treasury.' For considering her territory as a private estate and her subjects as serfs, she appropriated the whole produce of their labour, with the exception of what sufficed to keep body and soul together.

[1] From Mr. T. C. Plowden's Report, Set. Rep., I, 230.

It was by these means, and by nicely keeping the balance, and always limiting her demand to the exact point of endurance, and with equally due regard to favourable or unfavourable seasons, that a factitious state of prosperity was induced and maintained, which though it might, and I believe did, deceive the Begam's neighbours into an impression that her country was highly prosperous, could not delude the population into content and happiness. Above the surface and to the eye all was smiling and prosperous, but within was rottenness and misery. Under these circumstances the smallness of the above arrear is no proof of the fairness of the revenue. It rather shows that the collections were as much as the Begam's ingenuity could extract, and this balance being unrealizable, the demand was by so much at least too high." As long as the Begam retained possession of her energy and strength, this system, the product of her own tact and shrewdness, flourished. But when her heir attempted to meddle in the administration, during the last few years of her life, the fictitious nature of the prosperity of her estates became apparent. He abandoned the old system and its advances and made a settlement for three years. Adopting the old demand *plus* cesses, he allowed only a set-off of five per cent. and attempted to collect the rest as regular revenue. The net revenue of this settlement for 1243 *fasli* was Rs. 6,91,388, exclusive of 35 villages held *khám*. This resulted in an increase of a lakh of rupees in the demand, while no assistance was rendered in bad seasons or when untoward circumstances affected the cultivator. The result may be easily imagined: in the first year of the lease 92 villages fell under direct management, in the second six, and in the third 28 more villages, amounting to one-third of the whole estate. Ruin was impending, when the Begam's death, in January, 1836, and the consequent lapse of the estate to the British, induced the cultivators to return to their homes.

First settlements.

Mr. T. C. Plowden was appointed to settle the parganahs. A summary settlement, at a uniform reduction of nineteen per cent. on the lease, was first made to allow of preparations being made for a regular settlement. Mr. Plowden apparently put aside the Begam's collections, and found Rs. 5,44,000 a fair sum for the Government demand, which he distributed over the parganahs and then on each village. This work, from the absence of all data that could be relied upon, was not very satisfactorily performed. For we find from Mr. Forbes' report that the most startling inequalities in assessment were perpetrated. Some estates paid less than one-third of their net assets as land-revenue, whilst others had only cultivating profits left them. These inequalities were most glaring in every parganah in the case of the Ját proprietors, who seem to have been ground down to the utmost. The cause for this is not difficult to discover. The Begam's díwán was a Taga, between whose clansmen and the Játs there has ever been the bitterest enmity. The feud was heightened by the murder of the

Taga díwán of Bamnauli in Barnáwa by the Játs of the neighbouring villages. "In this way," writes Mr. Forbes, "by placing the slightest dependence upon an average of collections the injustice which springs from old party-feuds has been continued up to the present time." It has been one of the principal objects of the framers of the new settlements to correct these inequalities, which, however, have become so stereotyped as to be incapable of removal at once. The reduction in the assessment of over-taxed estates has been accomplished, but it has not been possible all at once to raise the demand on the Taga villages to the full quota which the State has a right to demand. However, the relief from cesses and miscellaneous dues and other exactions effected by Mr. Plowden was sufficient to give the Játs new life. Their industry was redoubled, and not only did they occupy fully their own villages, but swarmed out into those around, forming the most valuable tenantry of those landowners who were too proud to cultivate their own estates or were unable to manage them.

Parganah Sardhana.

In the Sardhana parganah Mr. Plowden's assessment has been lowered in nine villages. In one Ját village alone (Chhúr) it has been found necessary to remit Rs. 3,100. Still the land-revenue all round has been raised by Rs. 13,466, or 8·5 per cent., though the rate on cultivation has fallen from Rs. 3-2 to Rs. 2-9-3 per acre, owing to the increase in the cultivated area. Only 12,738 acres, or 14 per cent. of the total area have changed hands, exclusive of two *pattís* confiscated for rebellion. Rajpúts, sold or mortgaged 3,998 acres, Játs 1,228, and Tagas 1,456 acres, while Baniyas have bought up 2,996 acres or nearly one-fourth of the whole. The prevailing tenure is *bháyachára*. Rajpúts hold nearly half the parganah, next (in the south-west) Játs, and next Tagas. Patháns own three villages; Bilúches, two; Gújars, one; Ráwas, one; Sayyids, one; and Mewátis, one. Sardhana is now a flourishing parganah; sugarcane occupies 14 per cent. of the cultivated area, cotton 10 per cent. and wheat 33 per cent. The cane cultivation is, perhaps, the best in the district owing to the land being left fallow for one harvest before it is planted.

The following statement compares the statistics of Mr. Plowden's and Mr. Forbes' settlements:—

Period of settlement.	Total area.	Barren and revenue-free.	Cultivable.	Cultivated.			Total assessable.	Land-revenue.	Revenue-rates on cultivated area.
				Wet.	Dry.	Total.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres	Acres.	Rs.	Rs. a. p.
Former, ...	87,656	16,767	19,532	18,448	32,914	51,357	70,889	1,57,714	3 9 8
Present, Khálir, ...	8,702	1,206	3,147	817	3 532	4,349	7,496	1,71,180	2 9 3
Present, Bángar. ...	79,229	11,677	5,541	40,572	21,439	62,011	67,552		

Population.

According to the census of 1872, parganah Sardhana contained 61 inhabited villages, of which 4 had less than 200 inhabitants; 19 had between 200 and 500; 15 had between 500 and 1,000; 16 had between 1,000 and 2,000; 5 had between 2,000 and 3,000; and one had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Sardhana with 12,466 inhabitants.

The total population in 1872 numbered 82,401 souls (37,740 females), giving 601 to the square mile. Classified according to religion, there were 60,530 Hindus, of whom 27,482 were females; 21,516 Musalmáns, amongst whom 10,111 were females; and 354 Christians. Distributing the Hindu population amongst the four great classes, the census shows 6,304 Brahmans, of whom 2,857 were females; 8,282 Rajpúts, including 3,382 females; 6,092 Baniyas (2,776 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 39,853 souls, of whom 18,467 are females. The principal Brahman subdivisions found in this parganah are the Gaur (3,278), Sarasút (131), Bhút (281), Dakaut (159), Gujráti, Chaurasiya and Gautam. The Rajpúts belong to the Chauhán (646), Tonwár (51), Kachhwáha, Bhát and Sombansi clans and the Baniyas to the Agarwál (1,002), Saraugi (3,637), Gadariya (1,096), Bishni (125), and Raja-ke-barádari subdivisions. Amongst the other castes the following have more than one thousand members each:—Taga (3,424), Kahár (3,606), Hajjám (1,194), Ját (6,707), Kumhár (2,132), Chamár (9,748), Bhangi (3,156), and Jaláha (1,251). The following have less than one thousand members:—Máli, Jogi, Koli, Garariya, Sonár, Lohár, Barhai, Bharbhúnja, Gújar, Gosháin, Ahír, Bairági, Chhípi, Kalál, Dhobi, Lodha, Khatík, Saisi, Dhanak, Darzi, Kanjar, Saini, and Mína. The Musalmáns comprise Shaikhs (9,866), Patháns (1,549), Sayyids (457), and Mughals (139); the remainder are unspecified.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 622 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 3,783 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,365 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 11,743 in agricultural operations; 6,199 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 3,913 persons returned as labourers and 764 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 23,878 as landholders, 8,223 as

cultivators, and 50,300 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,678 males as able to read and write out of a total male population numbering 44,661 souls. In 1852 there were 80 estates in Sardhana comprising 78,680 acres. Two estates were added in 1853, making an area then of 87,532 acres.

SARDHANA, a tahsíl of the Meerut district, comprises parganahs Sardhana and Barnáwa. The total area, according to the census of 1872, then contained 251 square miles and 45 acres, of which 184 square miles and 215 acres were cultivated. The area assessed to Government revenue amounted to 251 square miles and two acres, of which 184 square miles and 172 acres were cultivated, 23 square miles and 299 acres were culturable, and 43 square miles and 171 acres were barren. The land-revenue for the same year stood at Rs. 3,00,438 (or with cesses Rs. 3,30,511), falling on the total area at Re. 1-13-11 per acre, on the area assessed to Government revenue at Rs. 1-13-11 per acre, and on the cultivated acre at Rs. 2-8-9. The total population numbered 147,398 souls (67,843 females), giving 587 to the square mile, distributed among 128 villages. The same statistics show 7 persons insane, 3 idiots, 10 deaf and dumb, 207 blind, and 23 lepers in the tahsíl. All other matters pertaining to the history of the tahsíl will be found under the district notice or separately under each parganah.

SARZAPUR, a village in parganah Hastinápur of the Máwána tahsíl, is distant 27·5 miles from Meerut. The population in 1872 was only 261. It has a second-class police-station.

SHAHDARA, a town in parganah Loni and tahsíl Gháziabad of the Meerut district, is situated near the left bank of the East Jumna canal, about 31 miles from Meerut. In 1865 the population was 7,227, and in 1872 was 7,257, of whom 5,683 were Hindús (2,686 females) and 1,574 were Musalmáns (767 females). It lies within the area of village Chandawali. This place was founded by Shah Jahán and named Shahdara or (royal gate) by him. His object was to make Shahdara an emporium for the supply of grain to his troops. The muhallah Dalhai was destroyed by Suraj Mal, Ját, of Bhartpur (Bhurtpore), and just before the battle of Pánipat the town itself was plundered by the soldiers of Ahmad Sháh Duráni. The *dál* of Dalhai is much celebrated in the neighbourhood, and the sweetmeats of Shahdara are much esteemed. The most important inhabitants are Mahájans and Brahmans. A large trade in shoes, leather, and sugar-refining is carried on. There is a first-class police-station and an imperial post-office. Shahdara has a municipality whose affairs are managed by a committee, of whom three are official and six are elected by the tax-payers. The income is derived from an octroi tax, which in 1872-73 fell at Re. 1-0-5 per head of the population. The following statements show the income of the municipality for four years and the character of

imports for two years. The grain duty has been abolished and a tax on carts laden with grain has been substituted for it:—

Receipts.	1871-72.	1872-73.	1873-74.	1874-75.	Expenditure.	1871-72.	1872-73.	1873-74.	1874-75.
	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
Opening balance, ...	3,795	9,623	5,622	2,544	Collection, ...	1,230	1,446	1,289	777
Class I.—Food and drink,	10,744	5,378	1,411	517	Head-office, ...	250	232	65	60
„ II.—Animals for slaughter.	161	180	150	186	Original works, ...	758	2,989	2,589	1,784
					Compensation, ...	1,050	2,408	48	147
„ III.—Fuel, &c., ...	115	251	181	145	Repairs, &c., ...	743	1,950	60	9
„ IV.—Building materials.	84	82	103	99	Police, ...	2,180	1,842	1,776	1,756
					Education. ...	...	292	385	215
„ V.—Drugs, spices, ..	17	24	33	21	Conservancy, ...	231	374	420	420
„ VI.—Tobacco, ...	42	24	35	18	Charitable grants, ...	26	595	380	146
„ VII.—Textile fabrics,	196	594	308	223	Road watering, ...	257	288	208	12
„ VIII.—Metals, ...	7	7	5	6	Miscellaneous, ...	25	97	94	148
Total octroi, ..	11,366	6,530	2,226	1,215					
Tolls on carts and carriages.	...	953	1,237	1,360 65					
Rents, ...	58	108	52						
Fines, ...	33	...	34	29					
Pounds, ...	61	154	89	127					
Miscellaneous, ...	1,056	726	581	576					
Extraordinary, ...	4	43	16	...					
Total, ...	16,373	18,137	9,857	5,910	Total, ...	6,750	12,513	7,314	5,474

Statement showing import of taxable articles for two years into Shahdara.

Articles.	*Net imports in*				*Consumption per head in*			
	1873-74.		1874-75.		1873-74.		1874-75.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Mds.	Rs.	Mds.	Rs.	Mds. s. c.	Rs. a. p.	Mds. s. c.	Rs. a. p.
Sugar, unrefined, ...	47,552	1,75,767	3,899	13,930	6 22 1	...	0 21 5	...
Ghi, ...	535	11,242	486	9,525	0 2 15	...	0 2 10	...
Other articles of food.	2,157 loads	1,718	1,609 loads	2,502	...	..	...	...
Oil and oil-seeds, ..	5,058	9,954	4,648	7,386	0 27 14	...	0 25 9	1 0 6
Fuel, &c., ...	...	1,641	...	1,599	...	0 3 7	...	0 3 6
Building materials,	...	3,344	...	3,233	...	0 7 4	...	0 7 1
Drugs and spices,...	897	2,115	511	1,351	0 4 15	...	0 2 13	...
Tobacco, ...	618	1,110	335	572	0 3 6½	...	0 1 13	...
European and native cloth.	...	11,109	...	10,576	...	1 8 4	...	1 7 3
Native shoes, ...	...	9,055	...	10,667	...	1 4 0	...	1 7 4
Metals, ...	...	338	42	382	...	0 0 9	...	0 0 10

The duty on grain was abolished and a toll on carts laden with grain was substituted in 1873-74. The sugar imports were only for nineteen days in 1874-75; loads are in addition to the value of other articles of food; the tax on animals was let out on contract.

SHÁHJAHÁNPUR, a large village in parganah Kithor and tahsíl Mawána of the Meerut district, is distant 17 miles from Meerut and about one mile eastward of Kithor on the Meerut and Garhmuktesar metalled road. The population in 1865 was 3,350 and in 1872 was 3,586, consisting principally of Pathán, Náis, Chamárs, and Mihtars. The site is fairly level and lies on each side of the Meerut road. Between the southern portion and the Meerut road is a large

irregular excavation full of water which serves for the reception of the drainage from the country round. To the west of this is a small bazar of poor mud huts where a market is held on Saturdays. In the town itself there are five large havelis bordered by brick walls, around which the mud-built houses of the people cluster without any apparent arrangement. Sháhjabánpur is a purely agricultural village, inhabited by cultivators and landowners. There is a Government school and a small Musalmán school, where pupils are taught to read the Korán. The water in the wells has risen from 23 feet to 15 feet from the surface since the introduction of the Anúpshahr branch of the Ganges canal, and is not so sweet as it used to be. Fever and spleen diseases are common, and of late years very prevalent. Sháhjahánpur was founded in the reign of the Emperor Sháhjahán by one Núr Khán, Pathán, who obtained a grant of land in the vicinity. There is a post-office and an encamping-ground for troops here. Water is abundant, but supplies can only be had after notice.

SHAMSHER in parganah Jalálabad and tahsíl Gháziabad of the Meerut district, 23 miles from Meerut, was formerly a celebrated village. The inhabitants were Káyaths in the service of the Hindu kings of Dehli. It is said that the place was so wealthy that it contained no less than 52 possessors of elephants. Shaháb-ud-dín and Ala-ud-dín ravaged the place, and the Káyaths fled never to return again till the time of Sháh Alam. There are now a few Káyath families, and a considerable number of cultivators have settled here under them. The population in 1872 numbered only 250 souls.

SÚRIRPUR, or Sarúrpur, a large village in parganah Kutána and tahsíl Bágpat of the Meerut district, is distant, 28⅜ miles from Meerut. Súrirpur first appears with more than 5,000 inhabitants in the census returns of 1872, when the numbers were 5,216, of whom 4,849 were Hindús (2,226 females) and 367 were Musalmáns (167 females). The inhabitants are for the most part Játs and Hindu Rajpúts.

TÍKRI, a large village or town in parganah Barnáwa of the Meerut district, is distant 27 miles from Meerut. In 1847 the population was returned at 9,882 souls; in 1853 it is not mentioned, and in 1865 the numbers were 5,631. In 1872 there were 5,698 inhabitants, of whom 4,989 were Hindús (2,277 females) and 709 were Musalmáns (339 females). There are five *pattis* or subdivisions in the village, all of which were formerly held by co-parceners, but partition has of late years been going on to a great extent. A Ját, by name, Theruis said to have founded this flourishing agricultural village, and the present occupants are his descendants. Tíkri is one of the villages from which the portion of Barnáwa lying to the north of the Karsuni Nádi is called 'Chaugaon,' or 'the tract of the four villages.' The other villages are Nirpura, Dáha, and Doghat. The land in the neighbourhood is somewhat sandy, owing to the presence of a depression in the general level of the country, which serves as a drainage channel for this portion of Barnáwa. The pattis of Tíkri are Ratnára, Dabra, Menawára, Dhamara, Chhajyána, and Bhojyára.

LITHOGRAPHED AT THE SURVEYOR GENERAL'S OFFICE, CALCUTTA, MAY 1875.
From an original supplied by E. T. Atkinson Esqr. in charge of the N. W. P. Gazetteer.

MUZAFFARNAGAR DISTRICT.

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MUZAFFARNAGAR, a district in the Meerut division, is bounded on the north by the Saháranpur district; on the east by the Ganges, which separates it from the Bijnaur district; on the west by the Jumna, forming the boundary between these Provinces and the

Boundaries.

Panjáb, and on the south by the Meerut district.[1] Muzaffarnagar lies between north latitude 29°-11′-30″ and 29°-45′-15″, and east longitude 77°-3′-45″ and 78°-10′-45″, with an area[2] in 1874 of 1,053,201 acres, or 1,645 square miles and 401 acres, and a population in 1865 returned at 682,212, and in 1872 at 690,107 souls, of whom 498,950 were Hindús, 191,097 were Musalmáns, and 60 were Christians, giving 419·5 to the square mile.[3] The length of the district from north to south varies from 31 to 36 miles, and its extreme breadth is about 61 miles.

Administrative subdivisions.

The following table shows the existing administrative subdivisions, with their area, population, and assessment. The area of the parganahs of the Ganges canal tract[4] is that given in the returns of the revision of settlement as corrected in 1874; for the remainder the measurements of 1861-62 have been taken:—

Present tahsíl.		Includes Parganah.	Entered in the *Ain-i-Akbari* in	Number of villages in 1875.	Land-revenue in 1281 *fasli* (1874 A. D.)	Area in acres in 1874.	Population.	In the police jurisdiction of station.
					Rs.			
I. Muzaffarnagar.	1	Muzaffarnagar,	Sarwat, ...	64	82,160	69,554	48,888	Muzaffarnagar.
	2	Baghra, ...	Baghra, ...	61	82,963	56,605	44,164	Titáwi.
	3	Charthawal, ...	Charthawal, ...	60	61,856	59,044	34,930	Charthawal.
	4	Púr Chhapár,...	Púr Chhapár,...	61	69,800	59,547	33,026	Púr.
	5	Gordhanpur, ...	Tughlikpur, ...	74	17,402	47,206	18,394	Gordhanpur.
II. Shámli.	6	Shámli, ...	Banat, ...	62	1,21,449	64,767	55,876	Shámli.
	7	Kairána, ...	Kairána, ...	45	53,660	57,545	38,828	Kairána.
	8	Thána Bhawan,	Thána Bhím, ...	56	57,994	57,590	41,928	Thána Bhawan.
	9	Bidauli, ...	Bidauli, ...	54	29,211	55,510	23,268	Bidauli, Chausána.
III. Jánsath.	10	Jhanjhána, ...	Jhanjhána, ...	62	58,638	60,117	36,090	Jhanjhána.
	11	Jánsath, ...	Jauli, ...	62	81,110	61,963	37,097	Jánsath.
	12	Khátauli, ...	Khátauli, ...	88	88,106	62,293	49,267	Khátauli.
	13	Bhúma, ...	Bhúma and Sambalhera.	68	52,948	80,245	35,990	Mírápur.
IV. Budhána.	14	Bhukarheri, ...	Síkri-Bhukarheri.	64	78,061	78,003	39,573	Bhupa.
	15	Budhána, ...	Budhána, ...	44	70,839	51,045	41,575	Budhána.
	16	Shikárpur, ...	Soron Palri and Khúdi.	57	1,05,240	54,015	52,329	Sháhpur.
	17	Kándhla, ...	Kándhla, ...	62	1,19,238	68,152	63,859	Kándhla.
		Total, ...	...	1,044	12,24,675	1,053,201	690,082	

[1] The principal authorities for this notice are the official records connected with the settlement, the reports of the Sanitary Commissioners and Canal Engineers, the records of the Board of Revenue in Allahabad, notes by Mr. G. Wilhams, C.S., and notes and, chiefly and most largely, M.S. reports by Mr. A. Cadell, C.S., on the parganahs of the Ganges canal tract. [2] The area in 1848 was given at 1,034,899 acres; in 1853 at 1,053,641 acres; in 1863-64 (settlement) at 1,033,468 acres; in 1865 at 1,054,065 acres, and by the census of 1872 the district contained 1,061,989 acres. Most of these discrepancies are explainable as due to loss by diluvion or increase by alluvion or transfer, or receipt of patches of land and villages from other districts. [3] The district details show the same number of Hindús and Musalmáns, 57 Europeans, one Eurasian, five Armenians, and one Native Christian, or a total of 690,111 souls. The parganah details give a total of 690,082 souls, and this I have followed throughout. A district return gives the population as 690,210. [4] The six parganahs of the Ganges canal tract referred to in this notice are Púr Chhapár, Muzaffarnagar, Khátauli, Jauli-Jánsath, Bhúma-Sambalhera, and Bhukarheri.

Parganah Kándhla, in the reign of Akbar, belonged to sirkár Dehli and all the remainder of the district to sirkár Saháranpur.

Administrative changes.

Owing to the changes which have taken place in the boundaries of the parganahs for administrative purposes, the existing parganahs represent the Akbari mahálsonly in name. Sarwat was superseded by Muzaffarnagar in Sháhjahán's reign, when parganahs Sarwat and Khátauli were bestowed upon Sayyid Muzaffar Khán, better known as Khánjahán, whose son founded Muzaffarnagar. Tughlikpur was known as Núrnagar between 1842 and 1855, and afterwards as Gordhanpur. Banat was early absorbed in Shámli, which bore the name of Shámli-Banat up to the settlement in 1860. Shámli itself formed a portion of Kairána. A village of Kairána named Muhammadpur Zamárdár formed a portion of the *jágír* of Nawáb Hakím Mukarrab Khán in the reign of Jahángír, and was bestowed by him on a follower, who founded a bazar in Muhammadpur and called it after his own name Shámli. The *jágír* remained in the family of Mukarrab Khán until the reign of Bahádur Sháh, who resumed it and formed it with a few other villages into a *tappa*, which in course of time acquired the name of a parganah. Jánsath was taken from Jauli and formed into a separate parganah through the influence of the Sayyids in the reign of Farrukhsiyár. It was incorporated with what remained of Jauli in 1842 under the name of Jauli-Jánsath and the tahsíl is now usually called Jánsath. Thána Bhím derives its name from the founder of the principal town in the parganah, but since the conquest the town has been called Thána Bhawan from a celebrated Hindu temple to Bhawáni. Bhukarheri comprises the old parganah of Síkri Bhukarheri. Bhúma was a separate parganah until the settlement under Regulation IX. of 1833, when it was broken up and the greater portion was included in Bahsúma. The latter parganah was again dismembered, and the northern portions went to swell the area of the reconstituted parganah of Bhúma and part of Bhukarheri. Bhúma is now included with Sambalhera as one parganah, known as Bhúma-Sambalhera or simply Bhúma. Shikárpur is made up of portions of the two old Akbari parganahs of Soron Palri and Khúdi: the latter is the old name of the town of Shikárpur.

The district was attached to Moradabad in 1803, and as it now stands, formed in August, 1804, a portion of the Saháranpur district, which extended from the Siwálik hills as far south as the northern parganahs of the Bulandshahr district. For the first two years a portion of the district was administered by the Resident at Dehli until, in 1805-06, the unwieldy tract was divided into a northern and southern charge under Collectors stationed at Saháranpur and Meerut.[1] It was not

Changes since the conquest.

[1] Board's Rec, Dec. 14, 1804, No. 20. The parganahs of Etáwa to the west of Farukhabad including Sikandra, were attached to Aligarh, as well as Anúpshahr from Moradabad. The line separating the northern from the southern division of Saháranpur passed through Muzaffarnagar to the Rámra Ghát on the Jumna.

until 1824 that the nucleus of the present district of Muzaffarnagar was formed by creating a sub-collectorship at Muzaffarnagar, with revenue jurisdiction over parganahs Muzaffarnagar, Baghra, Shámli, Bidauli, Jhanjhána, Charthawal, Khátauli, Jauli, Púr Chhapár, Gordhanpur, Bhukarheri, Jánsath, or Soran Soron, and Lalukheri. Mr. W. Dundas[1] was the first sub-collector, and he was succeeded in 1826 by Mr. Franco, during whose administration the sub-collectorship was converted into a regular district, and further changes took place which reduced the Saháranpur district proper to only 24 parganahs. Saháranpur lost parganahs Lakhnauti and Núrnagar at this time. Of the parganahs named above, Jauli is now included in Jánsath and Soron in Shikárpur. The next great series of changes took place in 1841, consequent on the settlement in 1838-40, when the following transfers were made from Saháranpur to this district:—

Changes in 1841.

Parganah.	No. of villages.	Revenue.	Parganah.	No. of villages.	Revenue.	Parganah.	No. of villages.	Revenue.	Parganah.	No. of villages.	Revenue.
		Rs.			Rs.			Rs.			Rs.
Saháranpur, ...	3	1,725	Manglaur,	5	1,431	Nakúr ...	4	3,608	Bhawan, ...	72	5 9,068
Deoband, ...	10	9,490	Jaurási,	1	600	Gangoh,	5	3,761	Chausatkheri	16	7,174
Rámpur, ...	1	*muáfi*	Búrki, ...	12	4,170	Nánauta,	5	10,312	Total ...	134	1,01,339

The following table shows the distribution of these transfers amongst the parganahs of the Muzaffarnagar district:—

Parganah.	No. of villages.	Revenue.	Parganah.	No. of villages.	Revenue.	Parganah.	No. of villages.	Revenue.	Parganah.	No. of villages.	Revenue.
		Rs.			Rs.			Rs.			Rs.
Budhána, ...	1	1,200	Jánsath,	1	200	Khátauli,	1	585	Púr, ...	3	1,050
Thána Bhawan,	53	46,529	Muzaffarnagar.	4	3,005	Kairána,	2	400	Total ...	134	1,01,339
Gordhanpur, ...	16	6,841	Charthawal.	20	18,115	Baghra,	5	3,360			
Jhanjhána, ...	20	10,944	Bidauli,...	4	1,220	Shámli,	4	7,880			

At the same time 93 villages, assessed at Rs. 69,781, were transferred to Saháranpur, *viz.*, two villages assessed at Rs. 1,400 from Baghra; five at Rs. 6,045 from Púr Chhapár; 17 at Rs. 7,813 from Núrnagar, and 69 at Rs. 54,523 from Lakhnauti. Of the Lakhnauti villages, 58 were transferred to Gangoh,

[1] Mr. Dundas reports having received charge of the several parganahs in his sub-collectorship from the Hon'ble Mr. Cavendish and from the Collectors of Meerut and Saháranpur on the 2nd, 8th, and 15th March, 1824, respectively.

three to Nakúr, seven to Rámpur, and one to the Kátha parganah; and of the remainder, four were transferred to Deoband, eight to Manglaur, nine to Rúrki, and three to Jawálapur. These arrangements were sanctioned by Government and came into force from January, 1842. At the same time that these changes took place to the north, the southern boundary was enlarged by the transfer of parganahs Shikárpur, Budhána, Kándhla, Kairána, Gangeru, Phugána, Titarwára, and Bhúma Sambalhera from Meerut. Gangeru has since been absorbed in Kándhla, Titarwára in Kairána, and Phugána in Kándhla. In 1820 Gangeru contained only two villages, Titarwára had only eight, Soron six, Phugána seven, Lalukheri six, Jauli 16, and Sambalhera 16. Some idea of the changes that have taken place and of the difficulty of identifying the exact areas of the old parganahs may be gathered from a comparison of the number of maháls included in some of the parganahs in 1820 with the returns of 1860:—

Parganah.	1820.		1860.		Parganah.	1820.		1860.	
	No. of maháls.	Revenue of 1819-20.	No. of maháls.	Revenue.		No. of maháls.	Revenue of 1819-20.	No. of maháls.	Revenue.
		Rs.		Rs.			Rs.		Rs.
Bhúma, ...	20	5,816	82	45,706	Kairána, ...	31	19,005	57	52,307
Baghra, ...	35	32,461	75	81,691	Khátauli, ...	78	47,669	82	61,311
Jauli, ...	12	5,810	63	5,878	Shikárpur, ...	44	60,950	62	1,03,301
Kándhla, ...	42	40,325	76	1,11,410	Shámli, ...	24	39,567	77	1,20,057

Changes in 1853-54.

The changes in 1853-54 were chiefly internal and resulted in the transfer of 12 villages from Meerut to Muzaffarnagar, and of one village from Muzaffarnagar to Meerut, *viz.*, two from Chhapauli to Kándhla, five from Niloha-Tárapur to Jánsath, and five from the same parganah to Bhúma, whilst one village was transferred from Bhúma to Niloha.

There are two civil courts in the district, that of the munsif of Muzaffarnagar and that of the Munsif of Shámli. In 1860-61 there were seven magisterial courts in the district, eight revenue courts, and four covenanted civilians. The staff in 1875 comprised three covenanted civilians—the magistrate-collector, joint magistrate, and assistant magistrate; one native deputy collector, four tahsíldárs with judicial powers, and seven honorary magistrates—Sayyid Husain Ali Khán, Lála Ude Rám, Abid Husain, Mahdi Husain, Rái Ganeshi Lál, Rái Umar Singh, and Sábit Ali. Besides the executive staff there is a district superintendent of police, a civil surgeon, and a deputy inspector of schools.

Physical features.

The district of Muzaffarnagar may be divided into four tracts. On the extreme east, the parganah of Gordhanpur, situated entirely in the valley of the Ganges, and to the south of it, in succession, the valley portions of Bhukarheri and Bhúma Sambalhera form the first tract. Next comes the tract between the Ganges and the west

Káli nadi watered by the Ganges canal; then the Káli-Hindan duáb; and lastly, the tract to the west of the Hindan bordering upon the Jumna and partly watered by the eastern Jumna canal. Gordhanpur lies in the delta formed by the confluence of the Soláni with the Ganges. All along the Soláni river from north to south the parganah consists of an almost continuous swamp fed by the overflow from the river and by percolation from the Ganges canal. The Soláni formerly flowed in a sufficiently deep bed through the middle of the parganah, but of late years it has formed for itself a channel just below the upland through the line of jhíls which mark the old bed of the Ganges. The change of course in the river and the increasing percolation from the canal have combined to ruin many villages, and in a great portion of the parganah the settlement concluded in 1862 has broken down, and thirty-nine villages of Gordhanpur and six estates of Púr Chhapár situated to the east of the Soláni, and which it is proposed to incorporate with the former parganah, are leased annually to the zamíndárs. Considerable efforts have been made by the Irrigation Department, both by embankments and by drainage lines, to prevent flooding from the river and to drain the marsh, but the completion of the scheme is still distant, and as yet but little benefit has resulted. Between the marsh affected villages to the west of the parganah and the Ganges, the land is on a higher level, but although water is close to the surface, irrigation is not general and is but little required. In the immediate vicinity of the Ganges the great river and its branches run riot through the land and make cultivation a very hazardous speculation. Communication, too, is restricted during the rains, and even during the winter months the ferries on the Soláni are rendered difficult by sudden freshes, due partly to the rain fall and partly to the escape-water from the Ganges canal, and the roads into the tract are either mere cart-tracts or are much neglected. These considerations have led to a recommendation that Gordhanpur should be attached to the Rúrki tahsíl of the Saháranpur district and should be administered by the subdivisional officer stationed at Rúrki.

North-east.

To the south of Gordhanpur, the Ganges, although it has of late years receded considerably, comes within a few miles of the uplands, but again flows in a south-westerly direction, leaving a gradually increasing extent of valley land in parganahs Bhukarheri and Bhúma Sambalhera.[1] The old high bank of the Ganges marks the division throughout between the uplands and the *khádir* or valley. The *khádir* as seen from this ridge presents a broad, far-stretching tract of level covered with patches of cultivation, but generally bearing nothing more than the coarse grasses known as *panni*, *patel*, and *sarkora*, with occasional clumps of tamarisk. In the cold season it is clothed in brown, trees are scarce and the grass has then begun to wither, and here and there rivulets occur, and beyond all is seen the stream

South-east.

[1] See these parganahs hereafter for an account of the *khádir*.

of the Ganges itself. In this tract, too, percolation from the canal is doing its work, and village after village has been injured by increasing marsh. Nor is the injury at an end, for year by year, fresh fields become useless and the cultivated area dwindles. Canal irrigation has made the upland so much more attractive to cultivators that it is now difficult to keep the inhabitants of the valley in the tract that they have occupied from time immemorial. The population is decreasing, and wild animals, especially pig and hog-deer, are becoming more numerous every year, so that between the deterioration of the soil, the superior attractions held out elsewhere to tenants and the increasing difficulty of cultivation, the future of this tract is not promising. The *khádir*, however, will always be a useful grazing ground, and it may perhaps be made to yield a larger supply of wood for the ploughs and sugar-mills of the prosperous upland than it does at present. The land-revenue in a great portion of this tract has fallen off very seriously as the subjoined statement shows, and it is hardly to be hoped that still further loss will be averted:—

Parganah.	Estates.	Revenue.			Parganah.	Estates.	Revenue.		
		1841.	1862-63.	1873-74.			1841.	1862-63.	1873-74
Gordhanpur, ...	39	9,399	8,387	4,694	Púr Chhapár,	6	604	80	250
Bhúma Sambalhera.	12	8,219	7,975	5,030	Bhukarheri,	7	3,451	3,717	2,658

In a little more than thirty years, therefore, the revenue of 64 estates has decreased by Rs. 8,841, or 41 per cent., and it is to be feared that the productiveness of the tract has fallen off in a still greater ratio.

Ganges-Káli duáb.

The second tract or the Káli-Ganges duáb is watered by the Ganges canal, which runs through the east of the district with a course almost due south to Belra, and thence it flows in a course somewhat south-west into the Meerut district. It is bounded on the east by the low valley of the Ganges rising, from which to the uplands the line of severance is marked by a series of ravines worn by the surface drainage and of little value even for pasturage. Beyond these ravines the uplands are reached. These have a general slope from east to west, and close to the eastern boundary from west to east with a more considerable slope from north to south, so that from within half a mile of the northern boundary of the district to within a short distance beyond the southern boundary no less than five falls are required on the Ganges canal to moderate the otherwise excessive slope of the canal channel. To the south-east between the canal and the low-lands the head-waters of the east Káli nadi or Nágan, as it is locally called, collect together, but do not assume a defined shape as a river until they

enter the Meerut district. To the west of the canal, the descent into the valley of the west Káli nadi is in the northern parganahs generally more gradual, but in the southern parganah of Khátauli, a belt of broken land divides in most villages the generally level upland from the valley of the river. Here, too, percolation from the canal has destroyed much fertile land.

Sandy ridges.

The chief physical feature of the entire tract is the presence of sand which occurs in belts of hillocks with a direction from north to south, and occasional transverse ridges in the north and in the form of a level plain in the south. This plain commences to the east of the sandy ridge in the Muzaffarnagar parganah and extends in a south-easterly direction through Jauli and Bhúma into the Meerut district. Mr. Cadell writes:—"This extensive sand plain gives to the south-eastern parganah an enormous excess of bad land, and in Bhúma Sambalhera less than one-third of the cultivated area is naturally good land; but the land is for the most part level, and there is in this way greater hope of improvement than in the northern parganah, Púr Chhapár, and in Muzaffarnagar, which are both traversed by lines of sandhills, not merely by level belts of sand. With the exception of Bhúma Sambalhera the natural fertility of the tract steadily improves towards the south. In Púr Chhapár little more than one-third of the cultivated area is natural loam or clay. In Bhukarheri and Muzaffarnagar, the east and west central parganahs, the proportion is increased to about one-half; in Jánsath it rises to sixty per cent.; and in the south-western parganah, Khátauli, more than two-thirds of the parganah are naturally good loam. Irrigation and careful cultivation by an increasing population are gradually changing the character of much of the sandy land, but a tract in which even now only a comparatively small percentage of the cultivated area is entered as loam and clay, and in which before the opening of the canal irrigation was for the most part difficult, must thirty years ago have greatly deserved the description of it given by Mr. Thornton as dry and sandy."

Duáb of the Hindan and the Káli.

The central tract between the Hindan and the Káli, comprising an area of over a lakh and a quarter of acres, is at present totally devoid of canal irrigation, but irrigation from wells is fairly sufficient except to the north, and parganah Charthawal alone required much consideration during the drought of 1868-69. The land is high throughout the centre of this tract and is naturally fertile, but the water-level is, as a rule, at a great depth. The projected branch from the Ganges canal *viâ* Deoband was intended to irrigate this portion of the district. The eastern and western portions of the central highland slope down to the rivers on either side, and is there marked by much broken ground, and a tendency, especially in the south, to an increase of ravines which cut into the good land above. Through a portion of parganah Shikárpur in this tract we

have the same phenomena of sandhills running from north to south, and adding to the natural difficulties due to the absence of the means of artificial irrigation. There are few tanks or jhíls throughout this Duáb, but, as stated above, the irrigation from wells is considerable. The lowland along the Hindan is marked by steeper banks, is larger in area, broader and more fertile than that of the west Káli nadi. Along the latter river several estates have been injured by the appearance of *reh* due to over-saturation and by the overflow of the river itself in time of flood. Injury from this latter source has, no doubt, been enhanced by the use of the Káli as a canal escape from Khátauli on the opposite side, but the connection between the increased volume of water in the river and the prevalence of *reh* has not as yet been so sufficiently established as to warrant our debiting the loss occasioned by its appearance to the action of the canal. On the whole, then, the soil in the uplands is good, and in many places *kuchcha* wells can be sunk, but, as a rule, they are expensive and in the sandier tracts almost impracticable.

The western tract.

The western tract between the Hindan and the Jumna naturally subdivides into three parts: the portion generally watered by the eastern Jumna canal between the Krishni on the east and the Kátha on the west, and the portions lying on either side of those rivers. Taking first the tract between the Hindan and the Krishni, it consists of a somewhat elevated plateau partly sloping on either side towards two rivers, but sufficiently low to admit of canal-irrigation from a branch of the eastern Jumna canal. To the north the soil is poor and irrigation is scanty, but the one increases in fertility and the other in quantity further south. The western portion of Charthawal is watered from the canal, but the adjoining parganah of Thána Bhawan possesses little means of irrigation. Further south in eastern Shámli and western Baghra the northern villages partake of the character of those in the extreme north of the district, whilst the southern villages improve rapidly in fertility. In the extreme south the villages of eastern Kándhla, and more especially western Budhána, though high, possess a naturally fertile soil. The ravines towards the Hindan are less marked than those on the left bank of that river. The eastern Jumna canal runs through the western portions of parganahs Thána Bhawan, Shámli, and Kándhla, and sends out numerous branches. The country is, as a rule, low, and in the rains is often inundated towards Kándhla on the south and Jhanjhána on the north-west. The soil is fertile on both sides of the canal and the cultivation is close and high.

Bidauli.

Parganahs Jhanjhána, Kairána, and Bidauli lie to the west of the canal. In the north-west of Thána Bhawan, the north of Jhanjhána and in nearly the whole of Bidauli, population is scanty and cultivation is backward. The soil, though naturally good,

is covered over with thick *dhák* jungle, interspersed with oases of light sandy soil, high above the ordinary level of the tract. Towards the south and east in Jhanjhána population increases, cultivation improves, and the jungle gradually disappears, but in the south-west of this parganah and the south of the neighbouring parganah of Bidauli there is a very small amount of cultivation, and scarcely a single inhabited village deserving the name, and this description applies equally to the villages of Kairána lying within the delta of the Kátha and the Jumna. The remaining villages of Kairána are good and up to the average of the district, and a few of them lie within the fertile *khádir* of the Jumna. To the extreme north-west, Bidauli has suffered much from the encroachments of the Jumna, which during the years 1841-61 separated six villages from this district and added them to Karnál in the Panjab. The process of diluvion goes on year by year, and much of the lands of other villages has since been cut away. Independent of the natural poverty of the soil, Bidauli suffers much from the efflorescence of *reh* caused by the overflow of the Jumna. This renders large tracts uncultivable, and in a week or ten days will often entirely kill a flourishing crop. Altogether the extreme north-west about Bidauli and the extreme north-east around Gordhanpur may be considered as the worst and most difficult tracts in the district. The entire area of the southern and central tracts, with the exception of Bhúma, is fertile and highly cultivated, while the tracts to the north possess fewer natural advantages.

Heights.

The following table of ascertained heights above the level of the sea in this district is extracted from the table of heights published by the Great Trigonometrical Survey. (See further under Begharazpur, Kaliána and Dehra in the alphabetical arrangement.)

On the Meerut and Saháranpur road (Saháranpur, 25 miles, Muzaffarnagar 12 miles):—

	Feet.
Top of milestone, ...	829·14
Ditto 9th milestone from Muzaffarnagar.	825·32
Ditto 8th ditto ditto, ...	824·11
Ditto 7th ditto ditto, ...	822·35
Ditto 6th ditto ditto, ...	822·07
Ditto 5th ditto ditto, ...	818 78
Ditto stone in Rámpur village, ...	795 87
Ditto 3rd milestone from Muzaffarnagar.	804·47
Ditto 2nd ditto ditto, ...	810·68
Ditto 1st ditto ditto, ...	807·52
Muzaffarnagar bench-mark, ...	790·01
Top of 1st milestone on Meerut road ...	805·86
Ditto 2nd ditto ditto, ..	801·83
Ditto 3rd ditto ditto, ...	801·97
Parapet of canal syphon bridge, ...	801·14
Top of 4th milestone on Meerut road,	797·95
Ditto 5th ditto ditto, ...	793·36
Top of 6th milestone on Meerut road, ...	783·33
Begharazpur ground-level, ...	815·94
Top of 7th milestone on Meerut road,	795·48
Ditto 8th ditto ditto, ...	791·59
Ditto 9th ditto ditto, ...	792·09
Ditto syphon bridge, ditto, ...	792·05
Ditto 10th milestone on Meerut road.	791·25
Parapet of Kirni *rajbaha* bridge, ...	791·72
Top of 11th milestone on Meerut road	785·35
Ditto 12th ditto ditto, ...	785·66
Khatauli bridge, ...	789 82
Plinth of canal milestone, No 62, ...	787·05
Top of 13th milestone on Meerut road.	780·05
Ditto 14th ditto ditto, ...	777·36
Ditto 15th ditto ditto, ...	775·72
Ditto canal syphon bridge, ...	775·28
Ditto 17th milestone on Meerut road,	768·84
Parapet of canal bridge 15½ miles from Meerut.	775·34

Difference in area.

The difference in area of the district at different periods has already been cursorily noticed, but needs some further explanation. In 1840 the district was assessed under Regulation IX. of 1833, and then showed a total area amounting to 691,706 acres. In 1842 five parganahs were received from Meerut and one from Saháranpur, which raised the area to 1,064,218 acres. Subsequently some slight changes occurred, due in a great measure to diluvion and exchange with the adjoining districts, so that in 1848 and the following years the distribution of the area in acres may be tabulated as follows:—

	Class of land.	Census of 1848.	Census of 1853.	Settlement, 1860-63.	Census of 1865.	Census of 1872.
Assessed area.	Cultivated area, ...	628,863	670,468	650,178	650,173	654,048
	Culturable, ...	219,019	153,173	197,931	197,931	201,843
Revenue-free, ...		43,099	76,287	32,789	53,376	57,836
Barren waste, ...		162,660	153,713	152,575	152,585	148,262
	Total, ...	1,053,641	1,053,641	1,033,468	1,054,065	1,061,989

From these returns it would appear that cultivation has increased in the quarter of a century, between 1848 and 1872, by 25,185 acres, though if the figures of 1853 be taken the cultivated area will show a decrease of 16,420 acres. The increased area under cultivation in 1853 was due to the breaking up of new land, and gave a net increase of 41,605 acres over 1848, or 6·6 per cent. on the previous cultivation and 4 per cent. on the total area. Taking the figures as tolerably correct, the only explanation that can be given is that much land was thrown out of cultivation during the famine year 1860-61, and much good land has been taken up for roads and canals since 1853. It is also to be noted that the figures for the culturable area in that year are so low as to lead one to suppose that land fit for but not actually under the plough was included in the cultivated area in 1853.

Soils.

At the old settlement Mr. Thornton adopted the following classification of soils:—*Mísan* or manured land; *rausli* or loam; *dákar* or clay, and *bhúr* or sand, with occasionally *danda* or high, uneven and poor sand, whilst Sir H. M. Elliot, distrusting the details of soils, satisfied himself with the distinction of wet and dry land. More recently, in 1863, Mr. Thornton's system was followed, while at the partial revision now brought to an end the soils recorded were *bárah* or garden-land, first *rausli* or loam, second *rausli* or sandy-loam, and *bhúr* or sand. Besides these broad divisions special terms are often used for each of these great classes under

particular circumstances: thus *ghúr* is the term applied to the soil of the sandy ridges; *choil* to the swamps of the Gordhanpur parganah; *cháhi* to irrigated land; and *muhíta cháhi* to land usually irrigated, but thrown out of irrigation during the year. Manured land and loam grow almost every kind of crop, but sand is seldom fit for anything except the poorer classes of crops, such as the millets in the rains, and only under favourable circumstances wheat and barley in the cold weather. Cane, cotton, tobacco and vegetables are only grown in manured land and the loamy soils yield rice and gram.

Reh.

The injurious saline efflorescence known as *reh* (impure carbonate of soda) occurs in considerable quantities along the Jumna in Bidauli, most abundantly along the course of the eastern Jumna canal and occasionally along the west Káli nadi and the Ganges canal. Taking the district as a whole, *reh* occurs both in the uplands and in the river valleys, generally in loam and never in sand. It shows itself both in level plains and on the banks of rivers wherever there would appear to be an excess of moisture, but owing to the absence of *usar* plains it is nowhere so prevalent as in the lower districts of the Duáb. Whenever the efflorescence becomes general over a field its productiveness ceases. The prevalence of *reh* along the line of the eastern Jumna canal is apparently due to wholesale over-irrigation and the consequent over-saturation of the soil, so that the cultivated area in many estates which were once the finest in the district has fallen off rather than increased. Here, too, occurs one of the clearest cases of reclamation of land once unculturable on account of *reh*. Several of the fields around Shámli have again come under the plough since the closure of the channel which fed the mills and the decrease of irrigation in other parts of the same estate. On the other hand, *reh* has increased very much of late years all through this tract and often appears in patches, and sometimes attacks the higher fields whilst the lower ones are unaffected. As far as is known *reh* comes up from below; constant rain washes the *reh* in, whilst a bright sun causes the moisture which held the *reh* in solution to evaporate and leave the white efflorescence on the surface, and hence it is not nearly so apparent in wet weather. *Reh* destroys the water of wells in its vicinity as well for drinking as for irrigation purposes, and when it once attacks a tract its effects are soon seen on the groves. In Shámli and Thána Bhawan trees, especially mango trees, begin to wither long before the crops are attacked. Young trees begin to droop at the tops, and as *reh* increases the mango disappears, the *sissu* soon follows, and then grass ceases to grow, and what was twenty years previously a grove now becomes unculturable land covered with a white efflorescence. The rise in the water-level of a low-lying tract by percolation from the canal and over-irrigation must have much to say to this state of affairs, for once this low-lying tract is left there is little or no *reh*, and in naturally dry

lowlands there is none. To remedy this evil will require more control over the distribution of water than is had at present.

Reclamation of saline tracts in America.

From inquiries made as to the methods adopted by the farmers in Utah in America in reclaiming lands lying near the Great Salt Sake, it would appear that experiments there have been very successful. One farmer advocates levelling the lands so that water can stand upon them, and then leaching them by continued ploughings so as to form terraces. When water is near the surface, a few inches of sand should be applied to the newly-leached land to prevent incrustation and to break the contact with the soil, and so facilitate the growth of the tender plant. Castor-beans, cotton, melons and lucerne were then sown in the order mentioned and were productive. Another recommends liberal irrigation when the mineral rises to the top in a frothy scum and can be drawn off, and then vegetable manure should be applied. Plentiful water with drains to run it off and the use of silt ploughed in with manure have been found successful. Another farmer writes :— "I have experimented on and brought into successful cultivation, in the following manner, some land so strongly impregnated with mineral that nothing grew upon it, and so situated that water could not be advantageously applied to wash the mineral out. Put on a good coat of warm manure and plough very deep in the fall of the year, and in the spring, before sowing, plough again, but not quite so deep as in the fall. The seed should be sown immediately after ploughing. For all kinds of roots furrow out with a small plough or cultivator, leaving sufficient room between the furrows to plough and cultivate the soil. Sow the seed in the drills, haul on and cover with fine sandy loam. Do not irrigate till the plants are of a good size and the weather hot. A few inches of sand, a coating of chaff or fine manure, over the whole surface after planting, prevents crushing and becomes mixed with and improves the soil for future crops. The following kinds of fruit can be successfully raised on such land, *viz.*, apples, pears, plums, currants, and gooseberries. Plough the ground deep ; and for all kinds of trees dig the hole two and a half feet square by two feet deep, put in the bottom of the hole six inches of good manure, then six inches of mixed sand and gravel, set the roots of the tree in good loam not too far from the surface. A tree thus planted will grow thriftily. I have an orchard planted as above bearing good fruit four years after planting. The mineral does not appear to injure the tree after it gets well started, and as its size and shade increase, so the soil surrounding it improves. A good coating of rough manure, chaff, or partially rotted straw over the whole surface the first year will keep the ground moist and prevent crusting. Where water is plentiful, and the land so situated that it can be applied, the saline substances can easily be washed out by having the necessary drainage, and the land be made productive either for grass, roots or grain."

In Southern India *kalar* land is successfully reclaimed by using the *ák* or *madár* (*Calatropis gigantea*) as manure. The land is flooded, ploughed up and thickly covered over with the leaves and stalks of the shrub, which are trampled in: after decomposition a second course of ploughing and flooding thoroughly reforms the land for the season. The process must be repeated two or more seasons to render the reclamation permanent, but rice can be grown even after the first season's preparation.

Reclamation in Madras.

The following statement shows the soils of the cultivated area and the distribution of the total area as ascertained during the measurement operations preceding the revision of 1861-62, and will show at once the peculiarities of each parganah:—

Soil statistics.

Statement showing the soils of the cultivated area and the distribution of the entire area of the district in 1860-61.

Parganah.	*Cultivated area.*					*Culturable.*		Barren.	Revenue-free.	Total area.
	Mixan.	*Rauli.*	*Dákar.*	*Bhúr.*	Total.	Old waste.	Present fallow.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Shámli, ...	10,639	29,494	4,137	1,185	45,455	5,797	1,402	11,191	922	64,767
Kándhla, ...	11,003	34,343	3,971	1,012	50,329	5,391	636	9,669	948	66,973
Thána Bhawan.	7,003	16,423	3,948	318	27,692	5,127	6,619	9,242	6,389	55,069
Budhána, ...	9,713	23,840	662	1,067	35,282	5,067	1,454	8,423	50	50,276
Shikárpur,	13,478	30,794	1,044	3,171	48,487	4,707	1,216	8,477	1,128	64,015
Baghra, ...	9,666	28,561	1,973	1,838	42,038	4,875	2,239	6,366	539	56,054
Jhanjhána,	4,302	16,337	2,581	1,791	25,011	14,066	4,920	9,040	4,399	57,436
Charthá-wal.	10,330	26,949	2,821	4,249	44,349	5,213	2,284	6,659	539	59,044
Kairána, ...	3,658	25,190	2,775	2,019	33,642	14,782	1,724	6,301	1,096	57,545
Gordhanpur,	3,215	9,369	3,433	101	16,118	14,649	2,912	7,623	...	41,302
Bidauli, ...	1,947	14,413	2,449	1,735	20,544	14,987	5,559	11,101	3,033	55,224
Muzaffarnagar.	4,804	29,320	1,541	6,252	41,917	3,334	4,994	7,844	2,932	61,021
Bhukarheri,	10,257	29,302	1,426	6,879	47,864	15,646	3,329	15,277	2,088	84,204
Púr Chhapár.	10,543	26,024	717	3,819	41,103	4,896	1,758	9,742	1,210	58,699
Jánsath, ...	7,523	26,985	351	13,904	48,763	3,178	2,659	6,239	1,132	61,971
Bhúma, ...	6,304	18,963	2,454	13,494	41,215	19,721	6,333	12,836	80	80,185
Khátauli, ...	8,641	24,737	856	6,130	40,364	4,844	1,623	6,548	6,304	59,683
Total, ...	133,026	411,044	37,139	68,964	650,173	146,270	51,661	152,575	32,789	1,033,468

To complete the soil returns I give the figures of the revision of settlement in 1871-72 for the six parganahs of the Ganges canal tract.

Parganah.	Cultivated area.							Culturable.	Revenue-free.	Barren.	Total.
	Bárah.	Rausli 1st.	Rausli 2nd.	Bhúr.	Total.	Dry.	Irrigated.				
Púr Chhapár	Acres	Acres.	Acres.	Acres	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Uplands, ...	19	14,197	13,209	13,575	41,000	20,989	20,011	2,413	2,595	6,574	52,582
Lowlands,	1	263	363	522	1,149	1,135	14	1,168	...	1,848	4,165
Total, ...	20	14,460	13,572	14,097	42,149	22,124	20,025	3,581	2,595	8,422	56,747
Muzaffar nagar.	91	24,026	10,553	11,766	46,436	25,774	20,662	5,550	10,276	7,292	69,554
Bhukarheri.											
Uplands, ...	47	19,723	13,567	12,159	45,496	21,579	23,917	3,395	2,084	8,708	59,743
Lowlands,	3	348	200	224	775	775	...	2,570	...	1,489	4,834
Total, ...	50	20,071	13,767	12,383	46,271	22,354	23,917	5,965	2,084	10,257	64,577
Jauli Jánsath.	321	28,833	7,448	13,717	50,319	26,074	24,245	4,575	1,135	5,934	61,963
Khátauli, ...	62	28,554	7,251	6,356	42,223	17,939	24,284	4,786	8,876	6,408	62,293
Bhúma Sambalhera.											
Uplands, ...	112	10,637	8,029	17,514	36,292	26,795	9,497	1,659	52	8,192	46,195
Lowlands,	...	222	43	42	307	305	2	1,225	...	1,196	2,728
Total, ...	112	10,859	8,072	17,556	36,599	27,100	9,499	2,884	52	9,388	48,923
Grand total,	656	126,803	60,663	75,875	263,997	141,365	122,632	27,341	25,018	47,701	364,057

Rivers.

The Ganges on the east and the Jumna on the west form the boundaries of the district and are the only navigable rivers within or adjoining it. Both have a parallel course from north to south. The Ganges recedes yearly more and more towards the east, cutting away the villages from the Bijnaur side and adding them to this district: thus, between 1842 and 1862 the two parganahs of Bhukarheri and Bhúma received, in this way, thirty-one estates from Bijnaur. The former high bank of the Ganges now constitutes the right bank of the Soláni, and there is reason to believe that the recession has taken place since 1398 A.D. Timúr, in his Memoirs,[1] mentions his raid into the Duáb. After leaving Meerut he marched by Mansura "to Pírozpur," which must either be the Fírozpur in parganah Hastinápur of the Meerut district, or the Firozpur seventeen miles northward, near Shukartár, in parganah Bhukarheri of this district. He came thence by the bank of the Ganges, where he encamped, and afterwards marched for fifteen *kos* up the river to Tughlikpur, which from his description must have been close upon the river. Now Tughlikpur gave its name to a parganah in the reign of Akbar subsequently known as Núrnagar from Núrjahán's village, and again as Gordhanpur. These two villages can therefore be no other than the Tughlikpur and Núrnagar, both situated on the high bank of the Ganges, to the right of the Soláni in parganah Pur Chhapár of this district. The greater portion of the parganah of Gordhanpur would thus seem to have formerly lain on the eastern

[1] Dowson's Elliot, III., 451.

side of the Ganges, and the process by which it has been separated from the Bijnaur district is in full force at the present day. Similar loss by diluvion is caused by the Jumna on the west. There also the tendency of the river is to move towards the east. Between 1841 and 1861, the villages of Nasírpur, Nalwi, Dubári, Chandipur, Rasúlpur, and Nagla Nega have been cut off from this side and added to the western bank of the river. Towards the Jumna 25 villages are recorded as liable to fluvial action; 12 in parganah Bidauli, 8 in Kairána, and 5 in Kándhla. On the Ganges, 7 villages in parganah Gordhanpur, 18 in Bhúma, and 11 in Bhukarheri are similarly affected. The rule observed in settling riparian disputes is that locally termed *machcha sío*, by which the deepest branch of the river is always considered the boundary between the lands on either bank, whatever course the current may take; but land detached as an island apparently remains, as a general rule, in the possession of the original proprietors. Some remarks on the volume of the Ganges at Shukartár in this district have been made in a former volume (II., 147), and the character of its *khádir* has also been noticed. In the Jumna *khádir* the only good villages are those lying to the south of the Kairána parganah. The navigation by both rivers is confined to the rafting of timber and a few empty boats from the Dún.

The Hindan.

Next in importance to the great rivers is the Hindan, which also runs from north to south through this district. It is crossed by the roads from Muzaffarnagar to Thána Bhawan, Shámli, and Budhána. To the north the banks are high and steep, and towards the south they are sloping and the lowlands are broader. The Hindan rises to the north of the Saháranpur district and receives the west Káli nadi on its left bank near Riauli Nagla in parganah Kándhla, to the south of this district. The Hindan is here fordable everywhere except after heavy rain, but is used neither for irrigation nor navigation. Floods in the Hindan cause a little damage to the lowlying lands on its banks, but they never rise sufficiently to cause any danger to the uplands. The only deterioration visible is that caused by the tendency of the drainage lines to cut into the bank separating the uplands from the *khádir*, but this is common to the Hindan with the other minor streams of the district. The west Káli nadi also rises in the Saháranpur district, and has a course somewhat south-west as far as Jasui; thence it turns to the south and again turns south-west to its junction with the Hindan. It runs between the Hindan and the Ganges canal. To the west of the Hindan is the Krishni, which flows in an almost parallel course to the former river. To the north the banks are high and steep, and but little damage is caused by it in season of flood. Further west the sluggish Kátha creeps along through Jhanjhána and Kairána, and joins the Jumna on the left bank near Rámra in parganah Kairána.

East Káli Nadi.

The East Káli Nadi, or as it is called in this district the Nágan, rises to the eastward of the sixtieth mile of the Ganges canal and between the canal and the great sand-ridge near Sarái or Rasúlpur in the north-east corner of parganah Khátauli in this district. From the north and east the level of parganah Khátauli gradually falls away into the depression which forms the source of the Káli, and so low is this that it admits of tanks or large ponds being excavated which become dry only in the hot weather. This line of drainage which ultimately forms the main arterial line of drainage for the whole of the eastern Duáb as far south as Kanauj in the Farukhabad district is immediately below these tanks an ill-defined nála running through grassy ill-cultivated fields. It gradually, however, expands and, in the latitude of Bulandshahr, becomes a perennial stream running through a valley marked by high banks. Some injury has been done, of late years, by the use of the imperfect channel as a canal escape for the superfluous water from Palri, and by pouring into a tributary of the Nágan the waters of a second escape. Thus, in two instances, a mere local drainage line, barely sufficient to carry off the rainfall in ordinary years, has been turned into a regular stream liable to rise and suddenly destroy the crops grown on its banks. The works recently undertaken by the Irrigation Department will, however, probably remove the swamps already created, and by clearing the channel of the sluggish Nágan prevent their recurrence. The rivers throughout the district, as a rule, run very far below the level of the upland, so that irrigation from them is impracticable at any time.

Ganges canal.

The general history of the Ganges canal has been given in the introduction, and it is only necessary here to notice its local character. The canal enters the district close to the old high bank of the Ganges in the Púr Chhapár parganah, and leaves it within some six miles of the west Káli nadi in the Khátauli parganah. During its course through the southern portion of the district it crosses the basin within which the head-waters of the east Káli collect. The character of the country is here very different from that through which the canal runs from its head to Asafnagar in the Saháranpur district. Here there is an almost equable slope throughout, and no great natural obstacles to be overcome, whilst further north torrents and valleys had both to be crossed by means which taxed severely the skill, energy and labour of the engineers. The first design for the portion of the works lying within this district embraced a canal with a slope of bed amounting to eighteen inches per mile, the superfluous declivity being disposed of by means of four descents of eight feet each, in masonry falls at Budhpur (Mahmúdpur), Belra, Jauli and Chitaura, and a branch canal to be given off at Jauli for the irrigation of the country as far as Fatehgarh.[1] On a close examination

[1] Cautley's Ganges Canal, I, 191.

of the southern parganahs of the Saháranpur district and the parganahs of this district it was found that there were occasional beds of sand and sand in hillocks exposed on the surface, but that below the surface of even the best soil, sand was found at a small depth. This discovery necessitated a reconstruction of the original design and a lowering of the slope to fifteen inches a mile. To carry off the excess of slope the falls were increased to ten, and were designed to overcome a total declivity of 74 feet between Asafnagar and Sumera, whilst the works at these places were enlarged and strengthened in many ways.

Description of the work.

During the first portion of its course in this district, as far as Belra, the canal has a direction almost due south. Throughout this tract the surface is marked by undulating hillocks of sands which run in belts from north to south or throw off lateral spurs which gradually intermingle with the surrounding plains. Between Jamálpur and Belra the canal passes two of these ridges: one at Bahlolpur and the other near Belra. The slope between Rúrki and Belra is estimated at 46 feet, or 2·3 feet per mile, and on this section within this district there are bridges at Dhamát, Tughlikpur and Belra, and falls and works at Belra with a waterway of 200 feet over the sill, and a navigable channel which leaves the main line of canal at a distance of 3,500 feet above the falls on the left, runs parallel at a distance of 1,000 feet, and rejoins the main canal again 4,000 feet below the falls. Just beyond Belra the canal bends slightly towards the south-west, approaching the more central portion of the highland forming the water-shed between the west Káli nadi and the head-waters of the east Káli nadi, and through them the water-shed between the Jumna and the Ganges. The distance between the two Káli rivers is here about eight miles, and the canal is almost four miles from either river. The features of the country through this line are very much the same as in the first tract. To the west of the canal, ridges of sandy hillocks appear at intervals, and occasionally spread over the plain. The excavations, therefore, both for the channel of the canal and the foundations of the works along it were sandy throughout. Clay for brick-making purposes was scarce, and much delay would have ensued were it not that the ruins of Chitaura and other old deserted towns supplied a large quantity. The longitudinal slope of the country for the 20 miles south of Belra is 32 feet, or 1·6 foot per mile; the transverse slope is from west to east, but the line of canal runs high and is well situated with regard to the water-line.

Jauli to Mahmúdpur.

At Jauli, on the fiftieth mile, a branch is drawn off, at first intended to water the country between the east Káli nadi and the Ganges as far as Farukhabad, but eventually stopping short at Anúpshahr. This branch runs at such a low level that it is of very little use to the irrigation of this district, and only gives water to a few villages in the extreme south-eastern corner. The principal works on the section of the canal

between Belra and Antwára are the bridges at Bhupa, Jauli, Dhakheri, Jánsath, and Saráí: falls and works at Jauli and Chitaura similar to those described above at Belra and the head of the Anúpshahr branch of the canal close to Jauli. The works at the last place consist of "a bridge of nine bays, of twenty feet each, over the main canal, and a bridge of four bays, of twenty feet each, over the head of the branch, connected by a line of curved revetment, resting upon a redan-shaped platform, which projects its acute angle towards the point of separation of the main stream and the branch; the sides of this redan consist of flights of steps, or ghâts, which are approached from the higher levels by stairs centrically placed on the curved revetment; both these bridges are fitted with shutters and planks and the necessary appliances for regulating the water." From Mahmúdpur, on the 60th mile, the canal continues in the same direction, bending after it leaves the district a few degrees nearer south. Immediately opposite Khátauli in the 62nd mile a cut connected with the west Káli nadi has been made to form an escape for superfluous water. This cut is sixty feet in width at its head, divided into ten openings of six feet each. The distance from the canal to the river is here 3§ miles, and the difference of level from the bed of the canal to that of the river is 29·21 feet. The main western distributary channel is carried across this escape cut by an aqueduct, connected with a bridge of cross-communication, to the floor of which a masonry descent is attached intended to overcome an excess declivity of eight feet. There are bridges at Khátauli and Satheri with three arches and a water-way of 165 feet.

Eastern Jumna canal.

The eastern Jumna canal was opened in 1830. The works on it were designed by Colonel Robert Smith of the Bengal Engineers, and were completed in five years from their commencement.[1] It enters this district at the village of Aurangabad, to the north of parganah Thána Bhawan, and flows southwards through parganahs Shámli and Kándhla into the Meerut district. There are bridges at Mánikpur, Khera Gadhái, Khail Shikárpur, and Tharuwa in parganah Thána Bhawan: at Jandheri, Bhainswál, Mandet, Shámli, and Liloan in parganah Shámli; and at Domakheri, Kandrauli (2), Fatehpur, Kándhla (2), Nála and Ailam in parganah Kándhla. The bends of the old course of the canal at different points which were left untouched by the remodelling operations contain much swamp which recent operations are designed to drain. These swamps are especially noticeable in the neighbourhood of Bhainswál, Salárwar, Shámlí, and Kándhla, and, indeed, in the whole tract of country lying along the right bank of the canal. During the cold weather of 1875 many important works connected with the drainage of the country irrigated by the eastern Jumna canal were taken in hand, and some of them are now arriving fast near completion.

[1] For further information regarding this canal see Gazetteer, II., 5, and hereafter under "Irrigation."

Navigation.

Navigation on the eastern Jumna canal from Yárpur in parganah Thána Bhawan to Sarnauli in parganah Loni of the Meerut district is confined to the carriage of materials for departmental purposes by means of three or four flat-bottomed boats belonging to Government. There are also two grain-boats attached to the Yárpur corn-mills, but they never appear to be devoted to the purpose for which they were originally intended. The navigation on the Ganges canal is very considerable,[1] and the principal commercial depôt here is Khátauli. There is only one water-mill on the Jumna canal with six sets of stones. The rates charged for grinding corn are from two annas to four annas per maund. There are two mills with three pairs of stones each on the Ganges canal at Chitaura, where the rates are lower: one anna to one and a half anna for the lower class of grains and two annas per maund for wheat. There are also mills with six pairs of stones at Muhammadpur and Jauli, but the latter are out of order owing to the defective state of the lock and channel. All these mills are leased out to contractors, and I have failed to obtain any information as to the amount of work done by them, or as to the estimation in which they are held in popular account. All through the Ganges canal line, not one-tenth of the water-power available is made use of, though some attempts have recently been made by issuing orders for improvements in the mills and their arrangements to render them more convenient and acceptable to the local grain merchants. In connection with recent experiments, the Meerut canal authorities intend to erect a sugar-cane crushing mill at Chitaura in this district, to be worked by the water-power of the falls there.

Jhíls.

The whole line of the Soláni in this district is little else than a line of jhíls and marshes, and the delta between its confluence with the Ganges is occupied by the great Jogawála jhíl, which has an area of three and a half miles by two miles, or about 14,000 bíghas. Altogether, the marshes about here cover upwards of 20,000 bíghas. Another line of marshes running parallel to the Ganges from a point about five miles south of the mouth of the Soláni on into the Meerut district, marks the old bed of the Ganges, the interval between which and the swamps is occupied by a maze of water-courses. In Púr, the parganah immediately adjoining Gordhanpur, the marsh lands along the Soláni cover about 3,000 bíghas. Throughout the remainder of the district there are few jhíls worthy of notice, but the Aldi jhíl in Kándhla, the Tisang and Jánsath jhíls in parganah Jánsath, the Badhiwála jhíl in Muzaffarnagar, the Chhapár tanks, the Bhúma tank in Bhúma and the Toda jhíl in Bidauli may be mentioned.

Ferries.

There are ferries across the Ganges leading to Bijnaur at Aki Kheri *alias* Matwáli, also called Raul ghát, due east of Muzaffarnagar, (21 miles from the civil station), and at Dharmpur (32 miles from Muzaffarnagar) a few miles south, opposite Dáránagar in the Bijnaur

[1] See Gazetteer, II. 31.

district and on the Jumna at Mawi in parganah Kairána (34 miles), from the civil station leading to Pánipat and at Andhera (44 miles), from the civil station in parganah Bidauli, leading to Nái Nagla in Karnál. At all these ferries bridges-of-boats are kept up during the cold and hot seasons, from October to June. These bridges are under the Karnál and Bijnaur authorities respectively. A pontoon bridge across the Soláni near Tughlikpur is frequently swept away, and another of very rude construction crosses the Hindan at Budhána During the rains a ferry-boat plies across the Hindan at Nágwa on the Meerut frontier, and another across the Jumna at Rámra ghát.

Communications.

The main line of communication is the Sindh, Dehli and Panjáb Railway, opened in 1869. On it are two railway stations,—the first at Khátauli, almost equidistant from Meerut and Muzaffarnagar, and the second at Muzaffarnagar. The roads in the district are divided into four classes:—first class, metalled and bridged; second class, raised and bridged but unmetalled; third class, unmetalled cross-country roads, no raised, but with a few culverts here and there; and fourth class, village cart-tracks. There are only two roads coming under the first class,—the Grand Trunk road from Meerut to Rúrki and the Muzaffarnagar and Shámli road. The former enters this district from Meerut and runs nearly parallel to the railway, passing through Khátauli, about four miles from the Meerut border, Bhainsi, Begharazpur to Muzaffarnagar; here it takes a bend to the right of the railway and passes through Sisauna, Chhapár, Barla and Bhukarheri into the Saháranpur district, with a total length in this district of 36 miles and 1,230 feet, all of which is metalled, raised and bridged. The railway is crossed at the 37th milestone from Meerut, and the Deoband and Bijnaur road crosses this road in the 45th mile at Barla. Although its importance has greatly diminished since the opening of the railway, it still supports a considerable traffic. The Muzaffarnagar and Shámli Road is as yet only metalled as far as the Hindan, but kunkur for the remainder is collected. It crosses the Káli nadi by a masonry bridge of three arches of 54 feet span each, in the second mile, where the roads to Thána Bhawan and Budhána branch off and then passes by Baghra, Titáwi and Banat to Shámli. A bridge across the Hindan in the eleventh mile, consisting of ten arches of 50 feet span each, has recently been completed. The Krishni is crossed in the twenty-first mile by a girder buckle-plate bridge: the total length of the road will be 24 miles. A short line of metalled road connects Khátauli town with the railway station.

The principal second-class roads are the following :—

		Miles	Feet.
1.	Meerut to Karnál by Shámli,	38	0
2.	Shámli and Kairána,	11	200
3.	Shámli and Kándhla,	13	2,600
4.	Banat and Jalálabad,	14	1,400
5.	Muzaffarnagar and Saháranpur,	10	0
6.	Ditto and Dharmpura by Jánsath,	30	4,000
7.	Muzaffarnagar to Bijnaur,	22	0
8.	Deoband to Bijnaur,	16	400
9.	Tughlikpur and Gordhanpur,	9	4,000
10.	Muzaffarnagar and Thána Bhawan,	17	4,200
11.	Ditto to Budhána,	16	3,800

The first road passes the Krishni nadi in its 17th mile by a bridge of three arches of 25 feet span each at right angles to the stream. The banks on the up-stream are well defined. From Shámli to the boundary of the district the road is out of repairs and wants culverts; the Kátha nadi, too, is unbridged, as well as a nála near Kerto (33rd mile). After crossing this nála, a village road strikes off to Bidauli and the Jumna, where there is a bridge-of-boats, and the road goes on to Karnál. The Shámli and Kairána road continues by a bridge-of-boats to the Jumna, and on to Pánipat. The third road leads to Dehli by Baraut, Bágpat and Loni. The fourth road joins the Muzaffarnagar road at Thána Bhawan in its eleventh mile and leads on by Nánauta and Rámpur to Saháranpur. The fifth roads leave the Grand Trunk Road at Rámpur and passes through Deoband to Saháranpur. It has a fine avenue of trees on its entire length, and on the fifth mile crosses the Káli by an old bridge with long, arched approaches. The sixth road crosses the railway in its second mile and has a fine avenue of trees for four miles. The fifth mile runs through sandhills and is heavy. After leaving Dharmpur the road passes through the bed of the Ganges and crosses the main stream at the bridge-of-boats leading to Bijnaur. The old Rúrki road branches off from the Grand Trunk Road on the first mile and unites with it again at the end of the fifth mile, and has now been abandoned. The seventh road leads by Bhupa to Bijnaur by the bridge-of-boats at Rauli across the Ganges. The eighth road commences in the nineteenth mile of the Muzaffarnagar and Bijnaur road, and at Bhukarheri meets the Púr road, passing on across the Grand Trunk Road to Rúrki at Barla, and joins the Saháranpur boundary at Kutbpur. The Gordhanpur road starts from the village of that name and runs through the Ganges khádir and the bed of the Soláni to join the Púr road at Tughlikpur. On the tenth road, the Hindan which is 200 feet broad during the rainy season, is unbridged, and the Krishni is unbridged. Similarly on the Budhána road the Hindan is unbridged, and for this reason it is proposed to treat it as a third-class road, to be used for local traffic only, and for through traffic to make a short new line from the Shámli and Muzaffarnagar road at a point near Titáwi through Pípalhera to Thána Bhawan. The third-class road from Muzaffarnagar to Daryapur is hardly discernible in parts beyond Jauli. After passing Daryapur, six miles beyond Jauli, it descends into the Ganges khádir, which is seldom passable except in very dry weather. The following is a list of the third-class or unmetalled and unraised roads :—

	Miles	Feet.		Miles	Feet.
Muzaffarnagar to Jauli, ...	17	4,600	Míránpur to Dharmpura, ...	12	3,200
Old Rúrki road, ...	4	1,500	Khátauli to Jánsath, ...	8	1,400
Khátauli and Míránpur, ...	12	1,300	Kairána to Jhanjhána, ...	9	0
Gordhanpur and Manglaur, ...	4	3,000	Circular roads, ...	5	600
Kairána to Budhána, ...	18	3,200	Muzaffarnagar and Pachenda, ...	4	1,352
Púr to Bhukarheri, ...	12	1,500	Khátauli to Budhána, ...	15	2,800

Second and third class roads are repaired every year, just before the close of the rainy season.

The following list gives the distances of the principal places from the head-quarters station :—

Baghra, ...	8	Gordhanpur, ...	26	Khátauli, ...	14
Bidauli, ...	36	Jalálabad, ...	21	Mansúrpur, ...	8
Bhainswál, ...	27	Jánsath, ...	14	Míránpur, ...	20
Bhukarheri, ...	15	Jaula, ...	22	Púr Chhapár, ...	16
Bhúma, ...	19	Jauli, ...	9	Sambalhera, ...	18
Budhána, ...	19	Jhanjhána, ...	30	Shámli, ...	24
Charthával, ...	7	Kairána, ...	31	Shikárpur, ...	14
Chhapár, ...	9	Kándhla, ...	33	Thána Bhawan, ...	18

Climate and meteorology.

The climate resembles that of Saháranpur. The rainfall is less owing to the greater distance from the hills, which removes the district, to a certain extent, from the influence of the local storms not infrequent in the more northern tract immediately under the hills at times when drought prevails elsewhere. The average heat is decidedly greater than in Saháranpur, though perceptibly less than at Meerut, only half a degree south.

The average total rainfall for the eleven years 1860-61 to 1870-71 is given below :—

Period.	1860-61.	1861-62.	1862-63.	1863-64.	1864-65.	1865-66.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.
1st June to 30th September.	13·4	28·6	31·2	30·1	21·4	22·8	18·8	29·5	11·1	16·4	34·2
1st October to 31st January.	0·1	·4	1·8	2 3	·1	4·6	·3	5·0	1·0	1·8	1·2
1st February to 31st May,	1·6	1·4	...	1·9	9·2	2·2	3·8	3·8	5·2	2·6	4·0
Total, ...	15·1	25·4	33·0	34·3	30·7	29 6	22·9	38·3	17·3	20·8	39·4

The following table gives the total rainfall at the principal stations of the district for the years 1844-45 to 1849-50 from returns existing among the records of the Board of Revenue :—

Name of stations.	1844-45.	1845-46.	1846-47.	1847-48.	1848-49.	1849-50.	Average.
Muzaffarnagar, ...	42·67	28 24	39·38	36·82	19·70	62·14	38·15
Khátauli, ...	55·50	34·65	43·94	39·72	24·23	61·91	43·62
Púr, ...	45·39	30·74	46·40	32·13	22 29	59 77	39·45
Kándhla, ...	28·62	25·67	35·61	41·61	24·16	42·29	32·99
Thána Bhawan, ...	26·85	29·35	33 20	36·42	23 89	42·87	32·59
Baghra, ...	...	...	...	49·85	22·97	45 08	39 30
Budhána, ...	...	...	...	41·93	19 94	45 79	36 90
Kairána, ...	...	...	...	49·48	22·23	40·10	37 27
Bidauli, ...	...	...	...	45 80	22·74	44·93	37 82
Jhanjhána, ...	...	...	...	40·83	25·79	45·02	37·21
Charthával, ...	...	...	...	32·44	26·37	53 72	34·17
Jánsath, ...	...	...	...	35·75	19 64	54·16	36·58
Míránpur, ...	...	...	...	30·40	14·85	58·93	34·72
Gordhanpur, ...	...	...	...	33·47	20·39	48·39	34·08
Bhukarheri, ...	...	...	...	40·43	24·31	49·14	37·96

PART II.

Productions of the District.

Animal kingdom.

There are no animals peculiar to the district, and the remarks under this head given under the Meerut district apply with equal force to Muzaffarnagar. Wild pigs and deer have increased very much, of late years, in the swampy portions of the *khádir* of the Ganges and do considerable damage to the scanty crops grown there as well as in the neighbouring upland. The thick vegetation along the canal, too, and extensive clumps of sugar-cane cultivation afford during the rains and early cold-weather ample cover for wild pigs and occasionally for leopards. The remainder of the district, with the exception of Bidauli, is too thickly populated to allow of wild animals increasing to the injury of the cultivation. The deaths from the attacks of wild animals and snake-bites in 1869 numbered 35, *viz.*, 32 males and 3 females; in 1872 the deaths of 10 males and 8 females were attributed to the same cause; in 1873 the numbers were 17 males and 7 females, and in 1874, 8 males and 6 females died from snake-bites.

Domestic cattle.

There are no really good breeds of domestic cattle indigenous to these Provinces. The best cattle for draught purposes come from Hánsi in the Panjáb and Nágpur in the Central Provinces, and next to them are the cattle imported from Naupára and Daureha in the north of Oudh. The cattle in these Provinces are, as a rule, deformed. They are sunk in the neck, short in the body and crumpled at the hump, and these faults are due as much to carelessness in breeding and over-taxation of strength when worked as to inherent causes. The improvement arising from careful crossing and care during the earlier stages of growth is shown at once whenever attempted. Natives are proverbially careless of their stock during the earlier and more important stage of their existence. They starve or stint the calves for the sake of the milk, and then put the ill-fed and ill-grown young animals to work much too soon. To this may be attributed the marked falling off of milch cattle in and about towns and cities where milk is in much demand. Food for milch cows should be partly green, and this should be mixed with *bhúsa* or chopped straw, finely-powdered oil-cake *(khuli)* husks of *dál*, &c.; some salt should be added and plenty of pure water should be procurable, not the stagnant water of the holes around the village site. A small tank should be added to each well into which water could be drawn for the cattle with the same care as for the owners. Cotton-seed *(binaula)* is also a favourite fodder for working cattle. Constant crossing does not appear to give good results. For the ordinary small breed of cattle, a cross with an English short-horn or Alderney bull would greatly improve the blood, power, milk and meat; while for the larger breed of cows kept by the wealthier classes, a cross with the English, Sindh or Nágaudh breeds is recommended.

In Kumaon there is a cross between the yak and the hill breed of cattle, called *jhabu*, which is invaluable for traffic through the passes into Tibet, but neither this cross nor the small, hardy mountain cattle of the Himálayas can live permanently in the plains, nor will the cross with them flourish. The best cattle for beef is the ordinary small breed of the country known as *gainis*, as they fatten soonest, and if the animal be properly fed, the meat is not so coarse as that of the larger breed. A cross between this dwarfish breed and the Kerry cow has done well in Ireland. Buffaloes are chiefly kept for milch purposes, though they are now often used for draught as well. Good buffaloes cost from Rs. 35 upwards, and the price of common animals has risen from Rs. 10 and Rs. 15 to Rs. 20 and Rs. 40. Common cows cost from Rs. 20 to Rs. 30, and Hánsi and Sindh cows from Rs. 50 to Rs. 80. The value of sheep has nearly doubled within the last twenty years, and the supply has not nearly kept up with the demand. Yearly more and more difficulty is found in getting sheep of the requisite age and size for mutton clubs, and nothing is being done to improve the breed or increase the area devoted to sheep-farming. In several districts the Gararíya caste, whose profession it is to breed sheep, have been obliged to give up their hereditary occupation and take to cultivation as the area of pasture land yearly decreases, and to this fact also may be, in a measure, attributed the falling off in the character and the increase in the price of cattle for agricultural purposes.

Horses.

The stud extends its operations to this district, but horse-breeding is not so popular here as in Saháranpur, though some fair animals may be found in the Rajpút *chaubísi* in the north-west of the district, on the Saháranpur border. A stud-bred colt may fetch from Rs. 100 to Rs. 125, or even Rs. 140. Stud-bred stallions have been distributed through some of the villages in the Budhána and Jánsath tahsíls, and both mares and stallions among those of Shámli. A country-bred horse of the ordinary description may be purchased for Rs. 100, but a really good one can rarely be procured for less than Rs. 250 or Rs. 300. This price is about the limit.

Fish.

With the exception of the *maháser*, the fishes which are abundant are the same as those found in the Saháranpur district, *viz.*, the *rohu*, *saul*, *chilwa*, *anwári*, and *bám*. They are sold at from one to two annas per ser, and are eaten by Musalmáns, Kahárs and many other Hindús.

Vegetable kingdom.

The crops grown in the district in the *kharíf* are sugar-cane, cotton, maize, several kinds of rice known as *dhán*, *munji*, *chahora*, *naka*, *bijar*, *ziri*, *kuári*, *sáthí*, &c., *joár* for its grain and as fodder (*chari*), *mandwa* (*Eleusine corocana*), *moth* (*Phaseolus aconitifolius*), *másh* or *urd* (*P. Roxburghii*), *til* (*Sesamum Indicum*), carrots, *arhar* (*Cajanus Indicus*), *múng* (*Phaseolus mungo*), *sánwak*, *gawár*, *chaina*, *kangni*, *lobiya*, *sani*, *patsan*, *bájra*, vegetables, tobacco, and indigo. In the *rabi*, wheat occupies over 30 per cent. of the total cultivated area; next in importance comes barley, wheat and barley

mixed, wheat and gram mixed, gram and barley mixed, barley and peas mixed, gram, peas, *masúr*, *sarson*, vegetables and garden produce generally. The mode of husbandry differs so little from that practised in the Meerut district that any detailed description would be mere repetitions. I shall, therefore, confine myself to local statistics and a comparison of the distribution of the crops at the settlement under Regulation IX. of 1833 in 1840-41 with that found to exist in 1860-61 and at the revision of the Ganges canal tract in 1871-72.

Cultivation in 1840-41.

Mr. Thornton notes that in 1840-41, when nearly all rents were paid in kind, a cultivator holding 100 bíghas should grow five bíghas of sugar-cane, two to five of cotton, about thirty of wheat and of other good crops; there should be a little maize, some *joár*, and about five bighas of *chari* for fodder. There should also be five bíghas of the coming year's sugar-cane and about fifty bíghas under such crops as *urd*, *moth*, *bájra*, and gram. The following table compiled by Mr. Thornton has reference to 247,227 acres of the cultivation, or two-thirds of the district as it then stood, and includes all the parganahs assessed by him except tahsíl Bidauli and parganah Gordhanpur. The object of the table is to show the proportions in which the several qualities of soil together compose the cultivated area; also the proportions per cent. in which the various agricultural products are found both in the whole area and also in each quality of soil. Where, as in "*bhúr*, wet," no proportion is given to the total area, it is because the area is too small to be expressed by one place of decimals. It will be seen that the irrigated land amounted to 17·5 per cent., *mísan* to 16·5 per cent., and *bhúr* or sand to 2·8 per cent. of the total cultivated area of the tract to which the statistics refer. *Muhíta* land is land capable of irrigation, equally with irrigated land, only in the rotation of crops its turn had arrived for being cultivated in the *kharíf*, which is not usually irrigated. The "average" line shows the proportion in which the products compose the whole cultivated area of all the denominations added together.

Kharíf Crops, 1840-41.

Soils.	Soils.	Sugar-cane.	Cane for the next year.	Cotton.	Fodder.	Rice.	*Joár.*	*Urd.*	*Moth.*	*Bájra.*	Indigo.	Maize.
Mísan, wet, ...	6·75	30 75	11·50	5 75	1·00	0·50	1·00	2·00	...	...	...	7·50
„ *muhíta*,	3·50	4·25	10 00	14·00	5 50	2·00	7·50	12 50	0·25	...	...	13·25
„ dry ...	6·25	18·00	14·25	7·25	3·25	4 50	3·25	11·75	0·25	0·75	...	2 25
Rausli, wet, ...	3·25	7·75	5·00	2·50	2·25	0·25	4 00	3·75	0·25	...	..	3·50
„ *muhíta*,	3·25	1·00	3·00	6·00	9 00	0·75	15·50	15·00	2 00	1·25	...	5·75
„ dry, ...	40·00	2·25	2·25	2·50	4·50	1·75	10·50	15 75	2·25	5·00	...	...
Dákar, wet,	0·50	2 50	1·00	0·50	0·50	17·25	2·50	2 00	0·25	...	...	5·00
„ *muhíta*,	0·50	1·00	1 50	2·00	4·00	24·50	6·75	8 25	...	...	1·75	0·75
„ dry, ...	8·00	1·75	1·00	0·50	2·00	32·75	6·00	12·50	0·75	0·75	...	1·75
Bhúr, wet, ...	...	7·50	8·25	2·50	0·75	1·00	1·00	2 00	4·50	...	...	1·50
„ *muhíta*,	...	...	2·00	3·00	3 00	...	7·00	3 50	10·75	9·00	...	1·50
„ dry, ...	28·00	0·50	0·50	0 75	1·75	0 75	2·25	3·00	10 25	32·00	...	1·00
Nihal, ...	...	1·75	...	...	...	0·50	0 50	0·50	...	...	...	...
Average, ...	100	4·75	3·50	2·75	3·25	3·75	8·50	9·75	3·75	11·25	...	3·25

Rabi Crops, 1840-41.

Soils.	Wheat.	Gram.	Barley.	*Bejar.*	Oil-seed.	Other crops of both seasons.	*Dofasli or extra crops.* Wheat.	Gram.	Barley.	Sugar-cane.	Other crops.	Total.
Mísan, wet, ...	32·00	1·75	2·50	0·50	...	3·00	2·50	1·25	0·75	6·50	0 75	11·75
„ *muhíta*,	9·75	14·50	1·00	1·00	...	4·00	0 50	...	0·25	10·25	...	11·00
„ dry, ...	23·75	5·75	1·25	0·75	0·25	2·25	0·50	2·75	0·25	1·00	0·25	4·75
Rausli, wet, ...	63·00	3·50	2·75	0·50	...	1·00	1·50	1·50	0·25	...	...	3 25
„ *muhíta*,	15·00	19·75	1·00	0·75	...	3·25	0·25	0·25	3·25	0·25	...	4·00
„ dry, ...	32·00	11·00	2·00	2 00	0·25	5·75	1·00	1·00	1·25	0·25	0·50	4 00
Dákar, wet ...	52·50	10·00	3·50	1·00	...	1·25	5·75	8·00	3·25	0·75	1·00	18·75
„ *muhíta*,	10·50	34·50	2 50	0·25	...	0·50	0·50	8·75	1·00	1·00	1·00	12·25
„ dry, ...	14·00	20·25	1·75	1 25	...	1·25	1·25	2·75	1·75	0·50	1·00	7·25
Bhúr, wet, ...	55·50	2·00	8·00	2·00	...	3·25	...	...	...	1·50	...	1·50
„ *muhíta*,...	23·75	17·50	4·25	4·50	...	6·75	...	...	...	...	...	...
„ dry, ...	21·00	7·50	12·00	8·25	0·50	1·00	0·25	0·25	0·50	...	...	1·00
Nihal, ...	34·50	7 25	35 00	11 25	...	1·50	...	1·00	...	...	...	1·00
Average, ...	26·50	9 25	4·75	3 25	0·25	1·50	1·10	1·50	0·75	1·25	...	4·50

These figures are taken from Mr. Thornton's report and show an average *kharif* cultivation of 54·5 per cent. of the total cultivati on and an average *rabi* cultivation of 45·5 per cent.

Cultivation in 1860-61.

The returns of the distribution of produce for 1860-61, though cast in a different form, will, in their general result, admit of comparison with the returns of 1840.[1] The following statement shows the distribution of the crops in each parganah (not in each class of soil as before) and gives the results of the statistics of the entire district. The figures show the percentage of the area under each crop to the entire cultivated area of the district, and exhibit a general improvement in the proportionate cultivation of the better classes of crops :—

Kharif Crops, 1860-61.

Parganah.	Sugarcane.	Sugarcane for next year.	Cotton.	Fodder.	Rice.	*Jwár.*	*Mash* or *urd.*	*Moth.*	*Bájra*	*Mandwa.*	Maize.	Other kharif crops and fallow.
Muzaffarnagar, ...	6 7	2·8	2·5	8·3	2 7	1·8	10·2	10·8	4 8	...	0·3	1 4
Púr Chhapár, ...	8·0	1·0	3·5	6 5	2·5	0·7	8·0	7·0	17·0	...	0 2	2 1
Charthawal, ...	4 5	...	4·5	11·5	3·0	2·5	14 0	6·5	2·0	0·7	2·5	3·5
Budhána, ...	3·7	...	3·2	19·0	2·0	14·0	3 0	8 0	0·7	0·5	3·2	3·7
Baghra, ...	6·7	1·3	2 8	14·7	1·7	4·0	8·0	4 7	1·3	0·5	3·0	4·0
Shikárpur, ...	7·5	1·0	3·0	14 0	1·5	5·0	3·5	11·0	0·5	0·3	2·2	2·5
Kándhla, ...	5 5	...	5·5	7 0	6·7	12·0	2·5	1 2	0·3	0·7	5 8	2·3
Jánsath, ...	6·7	1·2	3 3	6·5	1 7	3·0	15 5	5·2	15·8	...	1 5	2 9
Khátauli, ...	11·0	3·0	3·0	6 0	1·5	3·0	10·0	7·0	4·5	...	2·0	3·0
Bhúma, ...	6·0	1·5	2·8	4·0	6·0	1·2	6·7	7·5	19·0	...	3·0	2·3
Bhukarheri, ...	6·5	1·3	2·0	4 2	5·5	0·7	12 5	10·0	17·5	...	1·2	1·1
Sháunli, ...	8 2	...	4·2	11·8	6·8	7·5	3·0	1·5	0·5	2 3	4·2	0 5
Kairána, ...	1 0	...	5·2	7·0	3·2	11·0	3·7	2·2	2 0	2·0	4·0	4 0
Jhanjhána, ...	6 0	...	3·2	18·3	5 3	1·0	1·5	2 0	0·8	1·2	4 0	4 0
Thána Bhawan, ...	4·5	...	4 0	9·0	10 5	3 0	5 0	1·5	1·0	1·7	4·0	3 5
Bidauli, ...	3·5	...	2·7	11 5	1 5	3·0	0·5	1·5	1·5	2·7	4·3	4·3
Gordhanpur, ...	8·0	...	2·3	4·0	9·7	0·5	...	...	...	10·3	1·2	2·3
Average, ...	6·2	0·7	4·1	9·6	4 3	4·4	6·4	5·1	5·2	1·3	2·7	2·8

[1] In comparing the tables for 1840-41 with those for 1860-61 it must be remembered that the former only apply to a portion of the present district, but the general result will, to a great extent, hold good for the district as it now stands.

Rabi Crops, 1860-61.

Parganah.	Wheat.	Barley.	Gram.	*Bejar.*	Vegetable.	*Gojai.*	*Masúr.*	Other *rabi* crops and fallow.	*Proportion to total cultivation of.*	
									Rabi crops.	*Kharif* crops.
Muzaffarnagar, ...	29·5	4·0	5·0	0·7	0·2	...	...	8·3	47·7	52·3
Púr Chhapár, ...	25 5	8·3	3·5	0·5	...	3·2	...	2·5	43·5	56·50
Charthával, ...	42·5	1 3	0·7	0 2	...	0 3	...	...	45·0	55·0
Budhána, ...	21·0	1·8	2 8	...	...	...	...	13·4	39·6	61·0
Baghra, ...	16·3	1·2	1·2	...	1·3	...	...	27·3	47·3	52·7
Shikárpur, ...	19 0	1·7	0·8	...	...	0 3	...	26·2	48·0	52·0
Kándhla, ...	38·2	0·5	9 3	0·3	...	1·5	0·2	...	50·0	50·0
Jánsath, ...	18 0	3 7	3·8	...	...	2·0	...	14·2	36·7	63·3
Khátauli, ...	26·0	1·0	6·0	...	...	1·0	...	12·0	46·0	54·0
Bhúma, ...	15 7	8·5	2·8	...	...	8·7	...	4 3	40·0	60·0
Bhukarheri, ...	18·0	10·5	3·0	0 3	...	0·7	...	5 0	37·5	62·5
Shámli, ...	32·7	1·3	11·7	...	...	...	0·3	3·5	49·5	50·5
Kairána, ...	40·5	2 0	11 0	0·3	...	...	0·2	0·7	54·7	45·3
Jhanjhána, ...	47·0	2 0	2·7	...	...	0·5	0·5	...	52·7	47·3
Thána Bhawan, ...	48·5	1·5	2·3	..	...	...	...	...	52·3	47·7
Bidauli, ...	55 7	5 0	1 5	...	...	0·3	0·5	...	63·0	37·0
Gordhanpur, ...	48·5	5·7	4 ·0	...	...	0·8	1·3	1·4	61·7	38·3
Average, ...	31·6	3·1	4·3	0·1	...	1·1	...	7·0	47 2	52·8

The following table gives the distribution in acres over the cultivated area of the crops grown during the three years 1868-69 to 1870-71 :—

Year.	Kharif.							Rabi.					Double crops.			Total cultivation.
	Rice.	Cotton.	*Joár* and *bájra.*	*Til.*	Pulses.	Other crops.	Total kharif.	Wheat and barley.	Pulses.	Oil-seeds.	Others.	Total rabi.	Sugar.	Vegetables.	Fruit trees.	
1868-69,	33,547	19,257	29,402	2,412	21,317	103,916	209,845	223,539	10,426	976	22,600	257,541	31,721	2,012	16	501,135
1869-70,	40,330	27,653	47,274	813	...	171,001	287,071	223,689	10,428	987	22,600	257,604	38,221	3,210	...	586,106
1870-71,	44,757	32,781	54,154	224	...	185,983	317,899	224,812	12,990	876	27,402	266,180	42,829	3,625	2	629,735

Comparison of the produce of a portion of the district with Mr. Thornton's statistics.

We have still later information for a portion of the district in the returns of the cultivated area of the Ganges canal parganahs, and can compare these figures with the statistics collected at the settlement by Mr. Thornton in 1840-41. Mr. Elliot revised the assessment of Bhúma Sambalhera in 1836, and his crop statements are not procurable. The following statements show the percentage of each crop on the total cultivation in 1840-41 and in 1871-72 for five parganahs according to the settlement records, and for the sixth parganah for the latter year only. The total cultivated area includes 661 acres of *bárah* or garden land,

the crops of which are too small to notice. The figures give the percentage occupied by each crop to the total cultivated area:—

Kharif Crops.

Parganah.	Area in acres.	Sugar-cane.	Cotton.	*Munji*, or fine rice.	*Dhán*, or coarse rice.	Maize.	*Jodr.*	Fodder.	*Urd.*	*Bájra.*	Other kharif crops.
Púr Chhapár—											
1840-41, ...	20,046	4·0	3·0	...	4·0	...	...	...	...	...	43·0
1871-72, ...	23,855	5·3	4·2	7·3	2·2	0·2	0·8	8·0	7·8	15·2	5·7
Muzaffarnagar—											
1840-41, ...	21,523	4 0	2·0	..	3·0	...	...	...	...	...	45·0
1871-72, ...	26,606	5·8	3 2	4·0	3·5	0·3	1·7	8·7	8·5	11 0	10·5
Bhukarheri—											
1840-41, ...	19,853	4·0	2 0	...	5·0	...	...	...	...	...	46·0
1871-72, ...	27,151	5·5	3·8	5·7	2·3	0·5	0·7	6·8	10·0	18·8	4·7
Jauli Jánsath—											
1840-41, ...	25,807	4·0	2·0	...	5·0	...	...	...	...	...	48·0
1871-72, ...	27,824	6·3	3·0	2·7	2·8	0·7	1·5	7·7	11·3	11·2	8·8
Khátauli—											
1840-41, ...	21,457	5·0	3 0	...	3·0	...	...	...	...	...	45·0
1871-72, ...	24,943	9·3	3·7	2 8	4 7	2·3	2·5	12·0	7·5	3·2	11·0
Bhúma Sambalhera—											
1871-72, ...	21,616	6·8	3·3	1·2	1·0	2 8	1·2	6·5	7·5	16·7	12·5
Total of 1871-72,	151,995	6 5	3·8	4·0	2·7	0·8	1·5	8·2	8·5	12·7	8·5

Rabi Crops.

Parganah.	Area in acres.	Wheat.	Gram.	Barley.	Wheat and barley and wheat and gram.	Other *rabi* crops.	Total		Twice cropped.	Prepared for cane after a crop.	Total cultivated area in acres.
							Kharif.	Rabi.			
Púr Chhapár—											
1840-41, ...	17,076	29·0	...	5·0	...	12·0	54·0	46·0	...	...	37,122
1871-72, ...	18,273	25·3	1·7	8 3	7·2	0·8	56·7	43·3	2 7	1·5	42,149
Muzaffarnagar—											
1840-41, ...	18,335	32·0	...	1·0	...	13·0	54·0	46·0	...	...	39,858
1871-72, ...	19,738	30·2	3·3	4 2	2·7	2 4	57·2	42·8	0·6	0·3	46,436
Bhukarheri—											
1840-41, ...	14,977	20·0	...	10 0	...	13 0	57 0	43·0	...	...	34,830
1871-72, ...	19,067	22·2	2·8	12·7	3·0	0·5	58·8	41·2	4·7	0 8	46,271
Jauli Jánsath—											
1840-41, ...	17,933	20·0	...	8·0	...	13·0	59·0	41·0	...	...	43,740
1871-72, ...	22,175	26·5	5·5	6·2	4·0	1·8	56 0	44·0	3·0	0·3	50,319
Khátauli—											
1840-41, ...	16,859	30·0	...	1·0	...	13·0	56 0	44·0	...	...	38,316
1871-72, ...	17,217	34·0	4·0	0·8	1·0	1·2	59·0	41·0	6·5	1·5	42,223
Bhúma Sambalhera—											
1871-72, ...	14,871	16·0	3·3	9·2	10 0	2·0	59·5	40·5	80·	0 8	36,599
Total of 1871-72,	111,341	26·3	3·5	7·0	4·7	1·3	57·2	42·8	4·3	1·0	263,997

Rice and cane.

Since 1841 the area under sugar-cane, cotton, *chari* and rice has risen, and in the Ganges canal parganahs especially, the cultivation of the finer kind of rice known as *munji* has increased considerably. Before the opening of the canal it could only be grown in

favourable spots in the *khádir* and near tanks, but it now alternates with cane, cotton, maize, wheat and gram in the very best land around the village, and is equally esteemed with them. The proportion of the cultivation under *kharíf* crops would seem to have slightly increased in some parganahs since 1841, but although this is the case, there can be little doubt that the cold-weather crops are cultivated with better results than formerly, owing to the improved character of the soil and of the cultivation, and also that they are sown in as large, if not a larger, area than before. Although there is no record of the *dofasli* land, or land bearing two crops, in 1841 for the whole district, it is fairly certain that the facilities for irrigation afforded by the canal and the increased competition for land have rendered the practice of taking two crops off the best land in a single year much more common than of old. In 1841 the statistics for over one-half of the district show less than five per cent. of the total area under two crops. It would also seem that the proportion of cane grown after fallow is less than formerly prevailed, and the practice of planting the cane in a field which has just given a rain-crop now generally obtains. Thirty years ago, to grow cane after fallow was the rule, now it is the exception, and cane follows cotton, maize, *urd*, and the finer rice, and but very seldom succeeds wheat. Formerly more than two-thirds of the cane area lay fallow, now hardly one-ninth is allowed to rest. *Moth* and *bájra* among rain-crops and barley in the cold weather are the clearest signs of poor soil and careless agriculture in this part of the country, and the improvement in this respect is marked. The very small proportional area devoted to *joár* is perhaps due to the soil not being suitable to this crop, and partly to the fact that it is difficult to preserve it from the attacks of birds in a fairly wooded country and to the lateness of the crop, which prevents a second sowing and necessitates the devotion of a very considerable area to fodder crops. The area under *chari* and *gawár* is extensive in proportion to the excellence of the farming and the large number of cattle required, and in the inverse ratio to the acreage under the poorer rain-crops and to the extent of waste land available for grazing purposes. Taking the superior rain-crops, such as cotton, sugar-cane, maize, *munji*, and to a less extent *urd* and *chari*, they occupied 32·7 per cent. of the total cultivated area and 62 per cent. of the *kharíf* area in 1860-61; and the better *rabi* crops, such as wheat and gram (even omitting the mixed crops of wheat and barley, gram and wheat, peas and wheat), occupied 35·8 per cent. of the total cultivated area and 76 per cent. of the *rabi* cultivation. In 1870-71 cotton, sugar and rice alone occupied 19·1 per cent. of the total cultivation, while barley and wheat alone covered 35·7 per cent. It should be borne in mind, however, that though barley is grown in poor soil, it does not cover all the poor soil, and that wheat is often sown in very bad land, but at the same time its presence is an unquestionable sign of careful cultivation. Comparing all the returns, there can be no doubt that cultivation has

improved in quality and area very considerably since 1841, and that the movement is still on the right side. The next thirty years must show a still greater advance until all the available waste is absorbed, and then we must look to improved processes of husbandry for any further progress. On the whole, then, it may be stated that while the area under spring crops, such as wheat, gram and barley, has hardly, if at all, changed, the area under sugar-cane has increased generally and almost doubled in the Ganges canal tract, while the rice crop has more than doubled in the same tract and has improved in quantity and quality, and the area devoted to fodder crops has increased. The tendency is to increase the area of crops which may form valuable articles of export, as sugar, rice, and even wheat, at the expense of the poorer classes of crops of the same season, and hitherto the increase in the cultivated area has more than balanced the increased area devoted to other than food-grains.

Manure.

In the matter of manure the area of the *mísan* and *bárah* land gives the area of the manured land and a gauge of the resources of a village in this direction. In two-thirds of the district in 1840-41 the *mísan* area amounted to 16·5 per cent. of the total area cultivated. Sugar-cane, wheat and cotton are grown in *mísan* land, and "the man who has grown the customary quantity of them," writes Mr. Thornton, "is no more considered to have exerted an usual industry than is he considered to have abused his situation by sowing *urd*, *moth* and the rest of the poor crops, much of which will be succeeded in the following year by wheat. If he cultivates less of the better crops than is the ordinary proportion he would, in universal opinion, be acting dishonestly. It appears, therefore, that in the present state of agricultural science and with the present habits of the people in using cow-dung as fuel, the available manure only suffices for this portion of the land under crops." In 1860-61 the *mísan* area had increased to 20·4 per cent. of the cultivated area and is still increasing, for if we take the area of the Ganges canal parganahs and compare their statistics for 1861-62 with those collected in 1871-72, we find the manured area entered as 36 per cent. of the cultivated area. Increased population brings with it increased manure and a larger area devoted to the better crops, and nowhere is this shown better than in the upland portions of the parganahs lying in the Ganges-Káli Duáb. In his remarks on parganah Khátauli, Mr. Cadell, while accepting the rise from 20 per cent. in 1861-62 to 36 per cent. in 1871-72, is inclined to place little confidence in the results ordinarily deducible from these entries, and would not give much weight to them. He writes:—"It is very common in this neighbourhood to grow the cane crops in clumps around the estate, in this way giving nearly every field of good land its turn of manure and of the most careful cultivation. In this way a very ordinary rotation would give nearly half the cultivated area and nearly the whole of the irrigated area manured." Still there can be little doubt but that the manured area has increased considerably of late years.

Cost of cultivation.

The following statement gives the time of sowing and cutting and cost of cultivation of the principal crops as estimated by the tahsíldárs in each tahsíl (S = Shámli; B = Budhána; M = Muzaffarnagar, and J = Jánsath):—

		Time of sowing.	Time of cutting.	Cost of cultivation.						Outturn per acre.	Value of outturn.		Profit per acre.
				Seed.	Irrigation.	Labour.	Rent.	Other charges.	Total.		Price per maund.	Amount.	
				R. a. p.	R. a. p.	R. a. p.	R. a. p.	R. a. p.	R. a. p.	M.	Rs. a. p.	R. a. p.	R. a. p.
Cotton,...	S.	Jeth, ...	Kárttik, ...	0 4 0	3 12 0	3 0 0	6 0 0	6 8 0	19 8 0	6	3 8 0	21 0 0	1 8 0
	B.	Asárh ...	Pús, ...	..	...	...	...	...	15 0 0	7½	4 0 0	30 0 0	15 0 0
Maize, ...	S.	Ditto, ...	Kárttik, ...	0 4 0	2 13 0	1 0 0	4 8 0	4 0 0	12 9 0	10	1 5 4	13 5 4	0 12 4
	B.	Ditto, ..	Asauj, ...	...	...	...	...	...	8 0 0	9	1 5 4	12 0 0	4 0 0
	M.	Ditto, ...	Ditto and Bhádon.	...	...	...	...	..	8 2 0	15	1 5 4	20 0 0	11 14 0
	J.	Ditto, ...	Kárttik Margsir.	0 4 0	2 12 0	8 5 9	...	...	11 5 9	15	1 5 4	20 0 0	8 10 3
Joár, ...	S.	Ditto, ...	Margsir, ...	0 10 0	...	2 8 0	3 0 0	0 8 0	6 10 0	6	1 5 4	8 0 0	1 6 0
	B.	Ditto, ..	Kárttik, ...	...	...	...	...	..	4 8 0	9	1 5 4	12 0 0	7 8 0
Coarse rice.	S.	Ditto, ...	Asauj, ...	0 8 0	3 12 0	0 12 0	6 0 0	1 0 0	12 0 0	18	1 0 0	18 0 0	6 0 0
	B.	Ditto, ...	Ditto, ...	...	...	...	...	...	7 0 0	12	1 4 0	15 0 0	8 0 0
	M.	Ditto, ...	Bhádon, Kárttik.	..	...	...	...	...	10 5 0	18	1 0 0	18 0 0	7 11 0
	J.	Ditto, ...	Ditto, ...	0 12 0	9 0 0	3 5 0	...	...	13 1 0	18	1 0 0	18 0 0	4 15 0
Wheat,...	S.	Kárttik, ...	Baisákh, ...	2 8 0	2 12 0	1 4 0	6 0 0	3 0 0	15 0 0	12	1 10 8	20 0 0	5 0 0
	B.	Ditto, ...	Ditto. ...	...	...	...	...	...	18 0 0	18	1 10 8	30 0 0	12 0 0
	M.	Do., Margsir.	Chait, Baisakh.	...	...	...	...	..	11 3 3	36	1 0 0	36 0 0	24 13 9
	J.	Ditto, ...	Baisákh, ...	1 8 0	2 13 0	3 15 0	...	...	8 4 0	12	1 9 7	19 8 0	10 15 0
Barley,...	S.	Kárttik, ...	Ditto, ...	1 12 0	2 12 0	1 8 0	3 0 0	3 0 0	12 0 0	12	1 4 0	15 0 0	3 0 0
	B.	Asauj, ...	Ditto, ...	...	...	...	...	...	8 0 0	12	1 0 0	12 0 0	4 0 0
	M.	Karttik, ...	Phálgun, Chait.	...	...	...	..	...	6 9 0	15	1 0 0	15 0 0	8 7 0
	J.	Ditto, ..	Pus, ...	0 9 6	2 13 0	2 0 0	...	...	5 6 6	12	1 0 0	12 0 0	6 9 6
Gram,...	S.	Asauj, ...	Baisákh, ...	1 8 0	...	1 8 0	3 0 0	1 8 0	7 8 0	9	1 6 11	12 14 3	5 6 3
	B.	Ditto, ...	Chait, ...	...	...	...	...	...	5 0 0	9	1 8 11	14 0 3	9 0 3
	M.	Ditto, ...	Ditto, Baisakh.	...	...	...	...	..	4 2 6	12	1 5 4	16 0 0	11 13 6
	J.	Ditto, ...	Chait, ...	0 9 6	...	2 10 6	...	...	3 4 0	12	1 5 4	16 0 0	12 12 0
Sugar-cane.	S.	Chait, Baisakh.	Pús, Mágh,	6 0 0	6 4 0	6 0 0	12 0 0	40 8 0	70 12 0	32½	3 0 0	97 8 0	26 12 0
	B.	Phalgun, Chait.	Margsir, ...	...	...	...	...	...	60 0 0	30	3 0 0	90 0 0	30 0 0
	M.	Phálgun, ...	Kárttik, ...	..	...	..	...	...	37 10 0	30	3 8 0	105 0 0	67 6 0
	J.	Phalgun, Chait.	Ditto, ...	4 8 0	9 0 0	1 13 6	..	...	15 5 6	30	3 8 0	105 0 0	89 10 6

These estimates must be purely hypothetical, and are not only imperfect but considerably under the mark. No account is apparently taken of the value of the straw, and the estimated value of the labour given by the cultivator is too high. The returns are, however, useful, as showing the opinion of natives of much local experience, and how little confidence can be placed in them, and the outturn per acre may be advantageously compared with the note on produce returns given hereafter. The Budhána and Jánsath figures, apparently, do not in several instances include the important item of rent.

Continuing the agricultural vocabulary given under the Meerut district, I shall here note the terms used for implements generally in the Meerut district and in Muzaffarnagar.[1] Commencing with the *hal* or plough, the three pegs which prevent the *halas* from shifting forwards are called *banel*. These pegs press against the *hal*. At the yoke end of the *halas* are three holes pierced in which the *náŕis* or leathern thongs are tied. The yoke is attached by these. The holes themselves are called *karhe*. In this district the whole of the yoke is known as *júa*. The word *tarmáchi* applied elsewhere to the lower piece is unknown. All the pins of the yoke are known by one name, *sail*. The ropes or thongs attached to the inner pins are called *jot*, and the knots at both ends of these ropes are called *nángla*. In this district the drilling machine is attached to the plough. The channel through which the seed descends is here called *wairna*. If a man wishes to plough deep he harnesses the yoke higher up the *halas*. This deep ploughing is called *lagu*. When light ploughing is necessary the yoke is fastened lower down the *halas* nearer the share. This light ploughing is called *askulsiya*. The *katha* is a circular piece of iron placed on the share to prevent its going too deep into the earth, and the *kharwa* is a peg to prevent the *phál* or iron share from slipping out. The *dáhan* is a harrow with teeth for eradicating grass from ploughed land, and costs about Rs. 2. It is especially used to mix up the earth and water in a field tilled with rice and *munji*. There are usually four teeth called *khuntis*.

Implements.

The *maira* is a harrow without teeth and is drawn over a ploughed field after the seed has been sown; it costs about 24 annas. The *lakar* is a large wooden roller weighing from six to eight maunds. The block itself is called *lakar*, the pivots *chúl*, and the traces to which the yoke is attached are called *gúriyá*. There are two other names applied to this implement, one is *dhalaphor* or *dhelaphor*, another is *or* or *tor*. This roller is used for crushing clodded clayey soil, as the *maira* is used for *bhúr* land for the same purpose. The *mánjha* or *jándra* is the implement used for dividing a field into *kayáris* or small beds with a view to economy in the use of water; it is used by two men, one holds the handle and the other holds a string attached to the block in a direction opposite to the handle. It is worth only about four annas. *Jeli* is a kind of rake for collecting cut corn. The *kolhu* is the sugar-press. The names of the component parts of the press are given by Sir. H. Elliot in the language of Benares and Rohilkand, and it may be interesting to

Lakar.

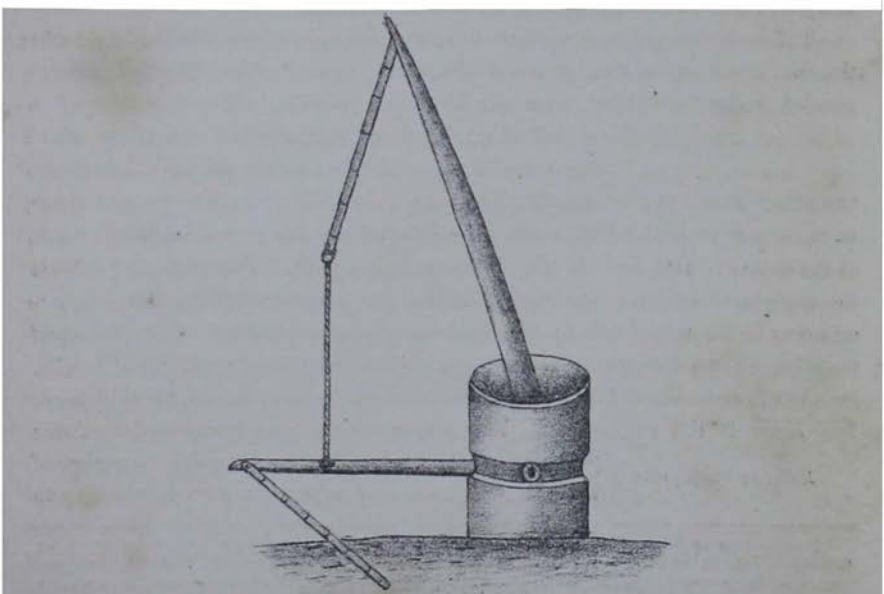
Kolhu or sugar-press.

[1] From notes by Mr. S. H. James, C.S. In Muzaffarnagar one plough represents stock as follows:—Two bullocks at Rs. 75 to 90, or four bullocks at Rs 120 to 150; plough and appurtenances, Rs. 3-8 to 10; *úd*, Rs. 10 to 15; *charas*, Rs. 4 to 5, and other implements, such as the *kasi*, *maira*, *phaura*, *khúrpa*, *gandása*, and *daranti*, Rs. 2-12 to 3-11, or a total of Rs. 65-4 to 123-11. To these may be added a *gárhi* at Rs. 30 and a sugar-mill at Rs. 40, so that it requires a fair amount of money to set up a small farmer, and he has frequently to borrow the amount necessary at an usurious rate of interest.

compare with them the names current in this and the Meerut district, which fairly represent the upper Duáb.[1]

Meerut.	Rohilkhand.	Benares.	Explanation.
(1.) Pát, ...	Pát, ...	Kattri, ...	The horizontal beam to which bullocks are attached.
(2.) Láth, gala, churan and nali.	Láth and játh,	Pát, *jath*, ...	The upright beam which moves in the mill.
(3.) Mánakmal, and malkham.	Malkham, ...	Khunta, ...	The upright post which is parallel to the last.
(4.) Makri and dhabka.	Chirya, ...	Dhenka, ...	The wood by which the two preceding are joined to one another.
(5.) Jhála and jhál,...	Ori, ...	Ori, ...	The basket on the horizontal beam from which the mill is fed.
(6.) Nari and nár, ...	Nári, ...	Nári, ...	The leather thong by which the horizontal beam is connected with the yoke.
(7.) Pair, ...	Paith, ...	Ghagra, ...	The circle in which the bullocks move.
(8.) Sahya, ...	Saya, ...	Saika, ...	The cup in which the expressed juice is transferred into the boiler.
(9.) Jhokat, ...	Jhokand, ...	Jhokand, ...	The place from which the fuel is supplied to the fire under the boiler.
(10.) Dhándhla, ...	Dhándra, ...	Dhándka, ...	The outlet for the smoke.
(11.) Dhori, ...	Dhor, ...	Dohra, ...	The spoon for taking the juice out of the boiler.
(12.) Chandwa, ...	Chandwa, ...	Gurda, ...	The scrape to prevent the sugar resting at the bottom of the boiler.
(13.) Nih, ...	Ota, ...	Nesur, ...	The raised blocks on which the cane is cut.
(14.) Gandrála, and Gandwála,	Gandarwála,	Gareran, ...	The receptacle for the sugar-cane before it is cut.

Besides these terms, the log connecting the *pát* and *dhabka* is sometimes called *bánkmal*. A *kolhu* costs from Rs. 30 to Rs. 60, and the wooden beams, the *kundi*, *chák*, and *nand* (or vessels used in various processes) about Rs. 6. The hire of a *karáhi* or iron boiler for a season is Rs. 10.



BENARES KOLHU OR SUGAR-MILL.

[1] Beames' Elliot, II., 375.

Other implements.

Other implements used in husbandry are the *gárhi* or *gári* (cart), the driver of which is called the gáriwán. The following is a list of the names of its different parts in this district. It will be seen that they differ more or less from the names given by Elliot.[1] The wheel generally is called *páhiya*. The spokes of the wheel are called *ari*; *puthi* is the felloe of a wheel. Of these felloes there are generally four. The nave of the wheel is called *náh*. The *andhi* is a small iron hoop going round the extremities in the middle of the *náh*, and the *awan* is the small hoop inside the *náh* in which the axle turns. The axle itself is called *dhura*. The two long shafts extending on either side from front to back are *phárs*, the transverse pieces are called *patri*, those extending beyond the wheel are called *tikánís*. The *bánk* or *painjani* is the curved beam that joins the two *tikánís*. *Chakel* is the iron pin for securing the *bánk* to the *dhura* or axle. The upright posts that support the siding are called *khaleva*; they are eight in number, four on either side, and are themselves fixed in the four transverse pieces called *patrís*. The long bambu poles supported by the *khalevas* laid horizontally to form the top of the sides are called *chandoís*, and the similar but shorter pole along the top of the tail of a cart is called *udhiyár*. These *chandoís* have a further support in the four posts fixed in the *tikánís*, which also take the strain off the *khalevas*. These four posts are called *dege*. Parallel to the *chandoís* and placed on the *patrís* are the two long bambu poles called *múngi*. The ropes strung on the *chandoís* and *múngís* and so forming the sides of the cart are called *phúrkas*. The reeds laid out at the bottom of the *gári*, so that nothing may fall through, are called *chhábar*. The part under the yoke, forming the extremities of the *phárs*, is called *mathápara*, and the protruding piece beneath this, on which the *gari* sometimes rests, is called *antara*. The place where the *gáriwán* sits is called *panjála*. The leather rope binding the yoke to the *mathápara* and *antara* is called *nár*, the third rope securing the yoke to the *phár* is called *joga*. Of these there are two, one on the outside of each *phár*. The small beam under the *phár* and in front of the *tikáni* is called *gaj*. The two posts attached to the *phárs* near the *mathápara* on which the loaded *gári* is made to rest are called *dáhi*.

Rural vocabulary.

As illustrations of the local dialect, other terms relating to rural life are given, and compared with those mentioned by Elliot. One of the sacks or baskets called *akaia* in the glossary is here *mánchi*. A pair of grain bags used as a pannier termed *akha* in the glossary are here *khúrji*. The word *ara*, with the meaning of cross-ploughing, is in this district the second ploughing. The first ploughing is *pár*, the second is *dusar* or *ara*. The *basúli* is a small instrument for cutting, the diminutive of *basúla*, an adze; the *cháshni* is a pan in which the juice of sugar-cane is boiled;

[1] Beames' Elliot, 231.

it is much the same as the *karáhi* except that it is somewhat larger. The *cháih* is a pad to prevent laden bullocks from being galled. *Chhájj* is a basket used in winnowing grain and also for irrigation. The *chhínka* is an ox-muzzle. A feeding trough in this district is *khúr*. The platform on which a person is posted to protect crops is here a *tánd*. *Gandása* is here a reaping-hook, called elsewhere a *garása*. The word is derived from *dasa*, a reaping-hook, and *ganna*, sugar-cane ready for cutting. The bundle of thorns tied together and drawn by bullocks over corn for the purpose of beating out the grain is in the glossary called *dhenkar*, in this district it is called *phalsa*. This process is never resorted to except where cattle are scarce. The word here applied to the treading of corn is *gáhna*. Besides this, *dáhan jorna* is applied in the same sense. *Dahendi* is a vessel for holding *dahí* or curds. *Dohni* is the name of the vessel which holds *dúdh*, or fresh milk. The word *jhákri* is much used and is synonymous with *dohni*. *Daránti* is a sickle. *Dantauli* or *dantwa* is a rake. The rope which binds the bullocks together when threshing, called in the glossary *dauri*, is here called *jor*. The rope round the neck of a yoked bullock is here *galtaní*. An ox goad is here termed *sánta*. A pair of plough oxen, called in the glossary *goín*, are here called a *jot*. A sheaf of corn is *gara*, not *gaira*. *Harsot* is used here to signify the bringing of the plough home across the back of a bullock or with the share inverted, after the conclusion of a day's work. *Hasiya* is a reaping hook. *Judhua* is a pad placed on the top of the head to support a water-jar. The *mándal* is the iron ring at the mouth of the *charas*. The *chaukta*, *dahána* or *katgar* is the wooden grating placed over a well to prevent people falling in, called elsewhere *jangla*. The *júr* is the well-yoke with the two *júás* parallel to each other. The *jáli* is a net used for binding up grass. *Barhi* is a strong rope of hemp. *Adána* is the framework of the well on which the wheel works, either post of which is called *gahlat* or *kanba*; the cross post is *maiyál*, and the pin supports of the wheel, or *charkhi*, the *goriya* and *súja*.

Irrigation.

Wells, tanks, and canals are used, in this district, for irrigation. Throughout the uplands, where water is found at a great depth, masonry wells are scarce, and *kuchcha* wells can only be dug at a great expense and only last for a year or two. Masonry wells for two pair of bullocks are said to cost from Rs. 400 to Rs. 500, and from Rs. 250 to Rs. 300 for one set of bullocks. Earthen wells cost from Rs. 25 to Rs. 30, and are impracticable in the more sandy tracts. Where water is near the surface *kuchcha* wells can be constructed for about seven or eight rupees, and in the Jumna *khádir* for from two to three rupees. Here, too, they last sometimes as long as one year, but usually for only one season or crop, and irrigate about four acres each. There is little tank-irrigation except in parganahs Shámli and Charthawal. The following

Wells.

statement shows the proportion of irrigation due to canals, wells and tanks respectively, as shown by the settlement records prepared in 1860-61 : —

Statement showing the mode of irrigation in 1860-61 *and in certain parganahs in* 1871-72.

Parganah.	Area in acres irrigated from				Total wet area.	Dry area.	Total cultivated area.	Masonry wells in 1860.		
	Wells.	Tanks.	Total.	Canals.				In repair.	Out of repair.	Total.
Shámli, ...	15,612	1,004	16,616	14,607	31,223	14,232	45,455	758	119	877
Kándhla, ...	12,659	292	12,951	25,855	38,806	11,529	50,329	355	42	397
Thána Bhawan, ...	9,468	632	10,100	9,598	19,698	7,994	27,692	567	165	732
Budhána, ...	18,318	...	18,318	200	18,518	16,764	35,282	186	24	210
Shikárpur, ...	19,343	...	19,343	1,865	21,208	27,279	48,487	422	35	457
Baghra, ...	14,016	...	14,016	4,880	18,896	23,142	42,038	485	85	570
Jhanjhána, ..	13,901	269	14,170	5,138	19,308	5,138	25,011	808	134	942
Charthawal, ...	8,318	1,990	10,308	4.865	15,173	29,176	44,349	253	54	307
Khátauli,—										
1860-61, ...	3,254	...	3,254	16,632	19,886	20,478	40,364	300	53	353
1871-72, ...	3.437	419	3,856	20,428	24,284	17,939	42,223	...	...	...
Kairána, ...	16,451	631	17,082	7,853	24,935	8,707	33,642	794	123	917
Gordhanpur ...	51	288	339	...	339	15,779	16,118	5	...	5
Bidauli, ...	14,068	...	14,068	..	14,068	6,476	20,544	857	105	962
Muzaffarnagar,—										
1860-61, ...	2,708	...	2,708	18,956	21,664	20,253	41,917	160	18	178
1871-72, ...	1,664	207	1,871	18,791	20,662	25,774	46,436	...	...	...
Bhukarheri,—										
1861-62, ...	164	...	164	25,238	25,402	22,462	47,864	17	...	17
1871-72, ...	39	17	56	23,861	23,917	23,917	46,271	...	...	...
Púr Chhapár,—										
1861-62, ...	259	...	259	26,025	26,284	14,819	41,103	2	...	2
1871-72, ...	111	49	160	19,865	20,025	22,124	42,149	...	...	...
Jánsath,—										
1861-62, ...	2,683	...	2,683	15,881	18,564	30,199	48,763	184	24	208
1871-72, ...	2,522	202	2,724	21,521	24,245	26,074	50,319	...	...	...
Bhúma—										
1861-62, ...	552	...	552	7,631	8,183	33,032	41,215	42	8	50
1871-72, ...	417	70	487	9,012	9,499	27,100	36,599	...	...	...

The figures for 1860-61 are taken from Mr. Martin's final report, and those for 1871-72 from Mr. Cadell's parganah reports.

Canals.

Irrigation in this district from the Ganges canal dates only from the year 1855. The maximum area irrigated was obtained during the year of drought in 1868-69, when 128,203 acres were watered from this canal alone ; the returns of an ordinary year show less than one-half this amount. Throughout a great portion of the tract traversed by the Ganges canal, owing to the prevalence of sand, irrigation was in former times practically unknown. Towards the south-east of the district in Bhúma, close around the town of Muzaffarnagar, to the south of Jánsath, and in a great portion of Khátauli, well-irrigation was common, but the greater portion of the area now watered by the canal had few wells and no tanks or other reservoirs

for water. The west Káli nadi runs far below the level of the uplands, and the minor streamlets which occur in the south-east could never have been of use for irrigation purposes. Before the introduction of the canal, the whole area might be said to be dependent upon the rainfall for its water, and only here and there and within the lowlands of the rivers could any reliance be placed upon the outturn from cultivation. Now, with the exception of a few villages in each parganah, the whole of the eastern portion of the district through which the canal runs is amply supplied with water, and, year by year, the few outlying estates are brought nearer and nearer to obtaining a share of water sufficient for all their wants. In addition to the practical prevention of the occurrence of famine in seasons of drought, the canal has had a marked influence in promoting the cultivation of trees for timber, fruit, and shade. Along the canal itself plantations of *sisu*, *tún* and the acacias flourish, and the example so successfully shown has been followed to some extent by the proprietary cultivating bodies throughout the canal-irrigated tract.

Injury caused by the canal.

At the same time, the canal has not been altogether a gain to the district. Besides the sanitary evils to be noticed hereafter, to which the canal has given rise, much unnecessary loss has been occasioned by the obstruction of the natural drainage lines by the works on the canal and its distributaries. On this subject Mr. Cadell writes :— "A great work like the Ganges canal could not, of course, be turned aside to avoid the depression of the east Káli river, but it is to be regretted that the existence of this depression as a line of drainage was not earlier and more practically acknowledged. But besides this, distributary after distributary has been run out without regard to the drainage of the country, and for many years the necessity of allowing waterway under the irrigation channels was not practically admitted, and it is only in quite recent years that the department has made it a rule that drainage should be facilitated instead of being obstructed. Now, unfortunately, the remedy has been rendered more difficult by the fact that the railway engineers seem to have considered that obstructions of drainage by irrigation works justified similar obstructions by the railway. The argument was not a good one; for a canal running across a drainage line and unprovided with permanent waterway under it, could be cut when flooding became serious, whereas the railway embankment forms a much more permanent barrier. Within the last few years very great improvement has been effected: one of the worst of the offending distributaries has been abandoned, permanent means of escape for the surface drainage have been constructed under several others, and in Muzaffarnagar an important system of drainage has greatly improved the condition of the neighbourhood, and similarly thorough work in the southern parganahs will quickly remedy the evils which have resulted from want of forethought in past years.

"In the Muzaffarnagar parganah especially, as to a less extent elsewhere, it must be admitted that the evil appeared more serious owing to the improvements which the canal itself has effected. Thirty years ago, when land was in less request, wide margins were left round ponds and depressions, and it was only in seasons of excessive rainfall that flooding occurred. Now cultivation has encroached upon the old depressions, small ponds have been ploughed up, and the area of cultivated land so situated as to be liable to injury from a heavy but not exceptional rainfall, has been largely increased. If, then, the Irrigation Department has a good deal to answer for with reference to drainage obstruction, it is also frequently blamed for what is only a natural result of the increased value of land, which thirty years ago was allowed to lie waste, while it now swells the profits of the landlord in a dry year, and intensifies the outcry against the department in a season of plentiful rain. There is now less ground for complaint, for a good deal has been done already, and when the projects under consideration shall have been completed, there will, as far as one can see, remain only the south-west corner of the tract (in which the railway, the canal and its distributaries have run more than ordinary riot among drainage lines), from the town of Khátauli to the Meerut boundary to be drained. But besides the, in most cases, unnecessary injury to the upland which has been occasioned by irrigation works, another evil may be justly attributed to the canal, and that is the great increase of marsh in the valleys of the rivers. As far as the eastern parganahs are concerned the injury has not been very serious, because the valley land is limited in extent, but its deterioration has been general and complete, alike in the Ganges valley and near the west and east Káli rivers, and it is probable that only in the case of the land lying along the latter streams, and especially in the valley of the east Káli, would the reclamation of the land give any adequate return for the expenditure required. When, therefore, the great improvement due to the canal comes to be estimated, it will be necessary to deduct a comparatively trifling sum for the injury to the valley which has been found inseparable from the improvement of the upland."

Canals, in some cases, unjustly blamed.

Mr. Cadell is borne out in his opinion by other officers. Thus Mr. S. N. Martin writes of Púr Chhapár, that "1,336 cultivated acres have deteriorated by percolation from the canal;" and in writing of parganah Muzaffarnagar he says:—"I have had many complaints about the uncertainty in the supply of canal water, often just at the critical period when the cane crops threaten to dry up unless moisture is given to the roots. On enquiry at Rúrki I ascertained these complaints to be well founded." Mr. C. Grant, also, speaks of the damage done by the overflow of the Nágan and its tributaries when used as canal escapes in parganahs Jánsath and

Opinions of other officers.

Khátauli. From the northern to the southern boundary of the Púr parganah all but the very highest and sandiest fields below the upland have been seriously injured by percolation from the canal added to the natural moisture of the Soláni *khádir*. Where cane, cotton and wheat were formerly grown, in dry seasons, rice occasionally succeeds, but much of it is hopelessly ruined, and the old rice land is now a reed-grown swamp. Cultivation has fallen from 1,470 acres in this tract to 836 acres, and the class of crop grown has also deteriorated. Cane is now grown in only one village, the area of cotton is gradually becoming more and more restricted, and the rice crop is now greatly less in area, inferior in quality, and more uncertain in produce. Formerly it was the only portion of the parganah in which the produce was tolerably assured, now it is the tract in which the crops are most doubtful and in which the produce is least valuable. Notwithstanding these injuries, the general result of the Ganges canal in this district has been an almost unmixed benefit to the people, for, compared with the increase in cultivation generally and in the production of the better class of crops, the loss is almost inappreciable.

Soláni villages.

The increase of revenue due to the influence of the canal has been very considerable in this district. Mr. S. N. Martin estimated the amount due to the influence of canals in the whole district at Rs. 74,830. In this estimate he made allowance for masonry and earthen wells thrown out of use by the canal, as well as for the average amount of earthen wells which might reasonably be expected to be brought into use should the canal supply be stopped. The result of his inquiries for the parganahs watered by the Ganges canal is given below. I also give Mr. Cadell's estimate in 1875, which is exclusive of the owner's rate:—

Increase in land-revenue due to the canal.

Parganah.	Mr. Martin's estimate, 1863.			Mr. Cadell's estimate, 1875.				
	Revenue of canal-irrigated villages.	Portion due to canal.	Balance.	Area irrigated in 1840-41.	*Area irrigated in 1872-73.*		Amount credited to canal at Re. 1 per acre.	Year in which to be credited.
					Canals.	Other sources.		
							Rs.	
Púr Chhapár, ...	59,330	12,290	47,040	53	19,925	100	19,372	1873-74.
Muzaffarnagar, ...	68,442	8,830	59,612	3,133	18,966	1,696	17,529	ditto.
Bhukarheri, ...	60,770	4,933	55,837	162	23,860	57	23,755	ditto.
Jauli Jánsath, ...	58,578	3,716	54,862	6,273	21,520	2,725	17,972	ditto.
Khátauli, ...	66,311	6,943	59,368	10,812	20,422	3,862	13,472	ditto.
Bhúma Sambalhera,	45,706	3,553	42,153	1,200	9,001	498	8,299	ditto.
Total, ...	359,137	40,265	318,872	21,633	113,694	8,938	100,999	

Area irrigated.

The following table shows the irrigated area from the Ganges canal for seven years according to seasons as shown by the irrigation reports of the Canal Department:—

Year.			Parganah.						
			Púr.	Bhukarheri.	Bhúma Sambalhera.	Jauli Jánsath.	Muzaffarnagar.	Khátauli.	Total.
1866-67.			Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Kharíf,	...	...	6,162	5,616	1,544	3,721	5,940	5,032	28,015
Rabí,	...	...	10,568	11,438	3,525	10,005	10,947	7,139	53,622
	Total,	...	16,730	17,054	5,069	13,726	16,887	12,171	81,637
1867-68.									
Kharíf,	...	...	7,368	7,193	1,898	4,591	7,980	6,218	35,248
Rabí,	...	...	6,874	6,606	1,126	1,660	6,937	5,120	28,373
	Total,	...	14,242	13,799	3,024	6,251	14,967	11,338	63,621
1868-69.									
Kharíf,	...	...	7,347	7,091	2,129	5,592	6,741	7,645	36,545
Rabí,	...	...	17,506	18,079	5,309	17,754	17,028	15,982	91,658
	Total,	...	24,853	25,170	7,433	23,346	23,769	23,627	128,203
1869-70.									
Kharíf,	...	...	8,166	8,293	2,073	6,342	8,389	7,776	41,039
Rabí,	...	...	5,843	6,232	1,423	5,782	7,815	7,991	35,086
	Total,	...	14,009	14,525	3,496	12,124	16,204	15,767	76,125
1870-71.									
Kharíf,	...	...	6,041	6,373	1,946	4,860	6,437	5,864	31,521
Rabí,	...	...	8,481	9,195	2,151	6,191	8,685	9,572	44,275
	Total,	...	14,522	15,568	4,097	11,051	15,122	15,436	75,796
1871-72.									
Kharíf,	...	...	5,111	5,482	1,620	3,532	5,783	5,234	26,762
Rabí,	...	...	7,108	6,193	1,140	4,110	6,769	7,306	32,626
	Total,	...	12,219	11,675	2,760	7,642	12,552	12,540	59,388
1872-73.									
Kharíf,	...	...	5,567	5,726	1,643	4,458	6,424	5,659	29,477
Rabí,	...	...	5,914	6,339	1,392	3,717	5,498	6,039	28,899
	Total,	...	11,481	12,065	3,035	8,175	11,922	11,698	58,376

Eastern Jumna Canal.

Irrigation from the Eastern Jumna canal was considerable before the last settlement and has increased very much of late years. The irrigated area at the last settlement cannot now be ascertained, but with the exception of Kándhla, Shámli and Thána Bhawan there were few portions of the western half of the district fully irrigated. The canal authorities appear to have been much less successful in economically distributing the water here than on the Ganges canal. In writing of Thána Bhawan Mr. Cadell remarks that the enormous proportion of old and new fallow in the tract to the west of the Hindan must be due "to the gradual falling out of cultivation of land which has been injured by over-irrigation." Mr. A. Colvin says of the same tract, "the villages bordering the canal are very much affected by the efflorescence known as *reh* which is destructive to all vegetation. The barren land of those villages at the last settlement was 535 acres, it is now 2,407. The increase in barren is chiefly attributable to the increase of this land." In fact it would appear that this tract is deteriorating rather than improving, and it is entirely owing to the rise in prices and the consequent rise in rent that there was not a serious diminution in the land revenue at the present settlement. The same tale is told of Shámli to the west of the Krishni. Here over-irigation has done its deadly work. Mr. Cadell writes:—"The land is slowly but steadily deteriorating, and malaria has enfeebled the population * * * the cultivated area is decreasing owing to the steady inroads of swamp and *reh*, and as irrigation is now so general, little improvement can be looked for in the great majority of estates from a large supply of canal water. Indeed, in many cases we must look for improvement to a systematic lessening of the canal-irrigated area, and to the benefit which is likely to follow from a return of the people to the use of wells. It would, I am convinced, be difficult to over-estimate the advantage which has been derived by many estates in this neighbourhood from a judicious supply of canal water, but it would be also difficult to overstate the injury which has been caused to the immediate neighbourhood of the canal by the short-sighted policy of deluging low-lying tracts with the sole object of collecting high water-rates over a limited area, and without paying the slightest attention to the wants of more distant lands, to the health of the people, or to the indirect revenue which a more enlightened system of distribution would secure to Government." Still, on the whole, as in the case of the Ganges canal, the benefits derived from the Eastern Jumna canal may be fairly said to compensate for the injuries it inflicts, and when the drainage projects now contemplated have been completed there will be little room for complaint.

Increase in land-revenue due to the Eastern Jumna canal.

The proportion of the increase in the land-revenue due to the action of the Eastern Jumna canal was estimated in 1863 by Mr. S. N. Martin at Rs. 34,565 as noted

below. Mr. Cadell's estimate in 1875, exclusive of owner's rate, is also given :—

Parganah.	Mr. Martin's estimate in 1863.				Mr. Cadell's estimate in 1875.	
	Initial revenue including canal profits.	Revenue of villages irrigated from the canal.	Canal profits.	Revenue minus canal profits.	*Area irrigated as recorded at settlement.*	
					Canals.	Other sources.
Budhána, ...	69,846	5,986	210	69,636	200	18,318
Shikárpur, ...	1,03,301	25,886	2 277	1,01,024	1,865	19,343
Baghra, ...	81,691	21,520	3,227	78,464	4,880	14,016
Charthawal,... ...	61,257	18,903	1,850	59,407	4,865	10,308
Jhanjhána, ...	56,698	31,085	2,767	53,931	5,138	14,170
Thána Bhawan, ...	57,082	42,775	6,024	51,058	9,598	10,100
Shámli, ...	1,20,057	77,370	5,107	1,14,950	14,607	16,616
Kándhla, ...	1,11,410	78,990	9,456	1,01,954	25,855	12,951
Kairána, ...	52,307	25,730	3,647	48,660	7,853	17,082
Total, ...	7,13,649	3,28,245	34,565	6,79,084	74,861	1,32,904

In Mr. Martin's estimate the amount of land irrigable from wells which had fallen into disuse since the canal was opened was calculated and allowed for at the rate of twenty-two acres per well. The difference between the wet and dry rates on the remainder of the irrigated area gives the profit due to the influence of the canal after allowing for all possible irrigation. It must be remembered that this is only an estimate, for there are no trustworthy statistics of the irrigation from the Eastern Jumna canal at the settlement in 1841.

Area irrigated.

The average estimated irrigation for the years 1839-40 and 1840-41, in this district, from the Jumna canal amounted to 22,205 acres; in 1850-52 the average was 37,615 acres, and

for 1858-59 and 1859-60 the returns show an average of 58,615 acres. The following statement shows the returns for seven years :—

Year.	Thána Bhawan.	Jhanjhána	Shámli.	Baghra.	Budhána.	Charthawal.	Shikárpur.	Kairána.	Kándhla.	Bidauli.	Total.
1866-67.											
Kharíf, ...	3,590	2,532	4,632	1,466	28	1,187	977	2,882	8,870	...	26,164
Rabí, ...	5,626	5,700	8,654	3,041	122	1,636	2,250	6,734	18,550	...	52,313
Total, ...	9,216	8,232	13,286	4,507	150	2,823	3,227	9,616	27,420	...	78,477
1867-68.											
Kharíf, ...	3,244	2,526	3,411	1,546	33	1,506	902	2,140	4,886	...	12,094
Rabí, ...	2,480	2,749	3,377	2,751	59	773	1,709	3,916	8,790	48	26,652
Total, ...	5,724	5,275	6,788	4,297	92	2,279	2,611	6,056	13,676	48	46,846
1868-69.											
Kharíf, ...	3,687	2,477	4,296	1,773	23	1,846	1,112	2,196	9,336	97	26,843
Rabí, ...	6,232	4,116	6,384	3,002	29	3,265	1,068	4,000	6,521	183	44,800
Total, ...	9,919	6,593	10,680	4,775	52	5,111	2,180	6,196	25,857	280	71,643
1869-70.											
Kharíf, ...	4,528	3,185	5,411	1,858	24	2,022	838	3,522	11,604	95	33,087
Rabí, ...	4,649	4,235	6,328	2,889	34	1,645	1,572	3,649	12,130	179	37,310
Total, ...	9,177	7,420	11,739	4,747	58	3,667	2,410	7,171	23,734	274	70,397
1870-71.											
Kharíf, ...	4,047	2,912	4,790	1,732	27	1,864	977	2,702	8,481	48	27,580
Rabí, ...	3,459	3,003	5,726	2,407	89	1,248	1,424	3,367	12,280	106	33,109
Total, ...	7,506	5,915	10,516	4,139	116	3,112	2,401	6,069	20,761	154	60,689
1871-72.											
Kharíf, ...	2,562	2,072	3,480	1,326	34	1,447	916	1,857	5,292	56	19,042
Rabí, ...	3,783	3,932	7,210	2,788	172	1,554	2,120	3,979	15,323	83	40,944
Total, ...	6,345	6,004	10,690	4,114	206	3,001	3,036	5,836	20,615	139	59,986
1872-73.											
Kharíf, ...	3,064	2,089	4,250	1,482	58	1,617	1,013	2,350	5,151	1	21,075
Rabí, ...	2,979	3,160	6,284	2,413	297	1,582	1,835	3,814	9,616	163	32,143
Total, ...	6,043	5,249	10,534	3,895	355	3,199	2,848	6,164	14,767	164	53,218

Influence of the canal on the better crops.

I give below statements showing the crops irrigated from both canals for several years. The Ganges canal, in addition to causing less harm by over-saturation of the soil, has done much good by promoting the cultivation of the better crops. Taking the five parganahs of Púr Chhapár, Muzaffarnagar, Bhukarheri, Jánsath, and Khátauli, the areas under the superior crops in 1841 and 1871 were as follows:—

	Sugar-cane.	Cotton.	Common rice.	Wheat.	Barley.	Other crops.	Total cultivation.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1841, ...	8,138	4,632	7,759	50,729	9,620	112,988	193,866
1871, ...	14,293	8,194	6,913	63,146	14,834	120,018	227,398

The entire area under sugar-cane watered by the Ganges canal was in 1869-70 21,133 acres, and in 1872-73 was 22,768 acres. *Munji* rice, followed by gram, is about as valuable as sugar-cane, and is grown in rotation on the same land, and the best is found in villages with a plentiful supply of canal water. In no case has the influence of the canal been more marked than in the cultivation of *munji*. It was unknown in the uplands, of the Ganges canal tract, in 1841, and, for many years, the cultivation of rice was unduly encouraged by the low water-rates charged for this crop. The rates have now been raised, and with the old artificial inducement to this cultivation removed, the canal-irrigated area of this crop has fallen from 20,448 acres in 1869-70 to little more than 9,000 acres in 1873-74 and 1874-75, whilst that of sugar-cane has risen from 14,305 acres in the first-named year to 20,904 acres in 1874-75.

Crops irrigated from the Ganges Canal.

Crops.	1869-70.	1870-71.	1871-72.	1872-73.	Crops.	1869-70.	1870-71.	1871-72.	1872-73.
Gardens, ...	336	433	226	299	Other pulses, ...	1,656	365	603	1,108
Sugar-cane, ...	14,304	15,593	12,974	15,443	Fodder, ...	1,068	64	71	55
Wheat, ...	29,561	38,444	28,046	26,746	Cotton, ...	2,023	188	232	85
Barley, ...	1,454	2,209	709	215	Other fibres, ...	171	478	564	250
Rice, ...	20,450	14,712	12,495	13,321	Indigo, ...	158	123	158	116
Maize, ...	469	15	2	1	Other dyes, ...	...	8	15	26
Other cereals,	1,049	183	793	56	Drugs, ...	12	9	...	...
Gram, ...	3,382	2,949	2,394	86	Oil-seeds, ...	2	29	106	64

Crops irrigated from the Eastern Jumna Canal.

M=by measurement; C=by contract.

Crops.	1868-69.		1869-70.		1870-71.		1871-72.		1872-73.	
	M.	C.	M.	C.	M.	C.	M.	C.	M.	C.
Gardens, ...	456	301	771	246	621	4	584	...	548	...
Sugar-cane, ...	6,011	1,887	5,489	1,340	6,148	18	6,127	7	7,314	11
Rice, ...	6,485	1,925	9,755	2,555	12,237	78	7,940	26	8,859	8
Wheat, ...	27,882	10,948	29,874	276	29,330	227	35,208	122	28,961	80
Barley, ...	1,773	405	1,994	1	1,146	12	1,341	2	730	2
Maize, ...	2,519	1,266	3,147	1,771	1,318	12	1,229	8	545	2
Other cereals, ...	118	104	704	224	509	1	136	1	1,019	4
Pulses, ...	2,399	802	4,236	317	2,141	3	1,231	6	726	4
Fodder, ...	1,327	651	862	661	550	7	269	8	111	1
Fibres, ...	1,773	798	3,159	1,513	6,005	44	2,394	30	2,409	8
Dyes, ...	264	355	398	676	916	28	593	23	1,079	10
Drugs, ...	...	...	40	2	57	...	47	6	34	...
Oil-seeds, ...	124	13	171	...	74	...	350	...	344	...

Drainage operations in connection with the canal.

The necessity for attempting something to remedy the evils complained of by the district officers in Muzaffarnagar, and indeed throughout the whole of the Meerut Division, led to a conference of collectors and canal officers in January, 1875, when the Government resolved to set on foot a complete scheme of drainage in connection with the canals and river systems of the northern Duáb, and works to cost over nineteen lakhs of rupees were taken in hand during the year. The following is a summary of the principal facts brought forward at the conference which bear upon this district.

Eastern Jumna canal.

On the Eastern Jumna canal, the Bhainswál cut on the right bank of the canal, which was intended to take a portion of the drainage which comes down the old bed of the canal, works badly, as where it gets into the high land its banks fall in and get choked. The Saláwar cut takes the greater portion of the drainage of the old bed of the canal under the present canal to the Krishni Nadi. Water now accumulates in the loops of the old bed of the canal where it has been abandoned, and the drainage of these accumulations forms part of the Krishni and Kátha projects. The town of Shámli and the country below it is constantly flooded from the overflow of the Shámli nála. A scheme for deepening and enlarging the bed of this channel is now in hand and is estimated to cost about two lakhs of rupees. In the meantime, the lower part of the bed will be deepened at once, so as to provide an outfall for the water which lodges in the town of Shámli, and the municipality will co-operate by digging channels within its own limits. The Fatehpur cut starts from the large jhíl of Fatehpur Aldi in parganah Kándhla, about a mile from the right bank of the canal, and passes under the canal by a syphon to the Krishni Nadi. Beyond the canal the cut has been of some

benefit, but it has not yet proved sufficient to carry off the flood-water from the village of Aldi. The swamps around the town of Kándhla will be taken in hand, in connection with the Kirthal drainage scheme in the Meerut district. The entire country along the right bank of the canal in the Thána Bhawan parganah near Muhammadpur Madan and between Shámli and Kándhla is in much need of drainage, and will be provided for in connection with the Kátha and Krishni schemes.

Ganges Canal.

On the Ganges canal the Soláni reclamation works are in active progress year by year, and a considerable area has been raised by the deposit of silt. The similar swamps to the south in the water-logged portions of parganahs Bhukarheri and Bhúma will be taken in hand. A project for the continuation of the Rehi cut (opened in 1873), so as to drain the swamps along the Grand Trunk Road and around the town of the Chhapár, is under consideration, as also Badhiwála cuts. A system of cuts for the relief of lands lying to the east of the town of Muzaffarnagar was completed before the rains of 1874 and did much good, and since then the drainage of Pachenda, Makhiáli, and Begharazpur has been included in the scheme. Between the Makhiáli distributary and the sand-hills which run down the middle of the district is a chain of small jhíls, some seven miles long; an outlet was provided for their storm-water under the right main distributary in 1872, and a drainage cut will now be made leading into the main cut of the Muzaffarnagar scheme below the village of Sandhauli. The Bhainsi cuts will afford relief to the drainage of seventy square miles of country lying between the sand-hills and the canal. The Nágan Nadi drainage scheme is intended to provide for the drainage of a large area lying between Jánsath and Khátauli, and the left bank of the Nágan Nadi by improving the bed of the latter, and by cuts from Jánsath, Tisang, and Chandsamand. The two former cuts were made some years ago, but they have not been successful, as Jánsath was flooded in the rains of 1874. In connection with this scheme a line of drainage is projected to carry off the water between Khátauli and Banghi into the East Káli Nadi. These with other minor works will complete the drainage system of the district as far as can be seen, and one good result has, at least, taken place, that the evil has been acknowledged, met and grappled with, and in a few years we may hope that fever-epidemics will be a thing of the past in Muzaffarnagar.

Famines and drought.

Before the opening of the canals, Muzaffarnagar must have suffered much from the famines which have periodically visited the Duáb, and some account of which is given in the introduction to the second volume of the Gazetteer. Though a fall of rain in the beginning of February, 1838, lessened the famine area in the district, it suffered greately in common with the remainder of the Duáb, and its influence was shown in the large proportion

1837-38.
1860-61.

of land shown as "recently abandoned" in the returns of the settlement in 1840-41. The remissions on account of the famine for the year 1245 *fasli* (1837-38 A.D.) amounted to Rs. 39,286. Famine again visited the district in 1860-61, when the Anúpshahr branch of the Ganges canal was undertaken as a famine-relief work. Owing, however, to the presence of the canals the pressure of the scarcity in this district was not felt so severely as elsewhere, and during January, 1861, it was only found necessary to expend Rs. 283 in outdoor relief to 3,182 persons, while in Meerut, to the south, 25,864 persons came for relief, and in Saháranpur, to the north, the numbers were over 17,000. Still for the next six months it was found necessary to relieve an average of 710 persons daily at an average daily cost of Rs. 174. The favourable nature of the season, during and after July, enabled the cultivators to plough their lands, and to assist them Rs. 25,000 were advanced as *takkávi* for the purchase of stock and seed. The balances rose to Rs. 1,34,095, of which sum the collection of Rs. 1,03,116 was postponed indefinitely and Rs. 31,531 for a certain period, and ultimately Rs. 10,607 were remitted.

1868-69.

We next come to the famine of 1868-69. In this district there was scarcely any rain from the end of July, 1868, to February, 1869. The rain-crops failed in the unirrigated portions of the uplands, and the sowings for the cold-weather crops were generally confined to the irrigable area. On such lands, however, the yield from the *rabi* harvest was good. Moreover, at the close of the year 1868, there were large stores of corn hoarded in the grain-pits of the district, and these changed hands, several times, during the last three months of the year without ever being opened. The existence of these supplies kept down prices, and distress was further mitigated by the high wages and ample work procurable on the Sindh, Panjáb and Dehli Railway, then under construction. In August, 1868, cartmen could earn eight to twelve annas a day, and there was abundant demand for every class of labour. The prices ruling at the close of the year rose to 9 sers per rupee for wheat, 11 sers for barley, and 10 sers for *bájra*, and occasioned much distress, so that it was eventually found necessary to provide both gratuitous relief and famine works. Between the 4th of January and 15th of September, 1869, a daily average of 53 persons received gratuitous relief at a cost of Rs. 2,659. The most important of the famine works were the Shámli and Muzaffarnagar road, and the road from Deoband in the Saháranpur district through the north-eastern parganahs to Bijnaur. During the last three months of 1868 immigrants arrived from Bikanír and the western states of Rajputána, but refused to work; the able-bodied passed to the east and the destitute and sick were relieved in the work-houses. Altogether between December, 1868, and October, 1869, an average of 195 persons were employed daily on relief works in this district at a cost of Rs. 6,583. Trade

was vigorous during the famine, and the district exported not only its own stores but was the channel of an important transit trade in grain. In September, 1868, there were large imports of corn from Meerut, and straw for cattle came in December from Saháranpur. In January, 1869, great quantities of maize came by the Ganges canal into Khátauli. Again in March 600 maunds of grain came in by rail from the Panjáb, but the subsequent strain on the local supplies for the Panjáb, Saháranpur, and Rohilkhand was very great. In March the northern parganahs exported wheat to Saháranpur, and towards the end of the same month considerable consignments were sent to Ambála (Umballa). During the first week in April the Ambála markets received 2,000 maunds of grain from this district, and in the following week Rs. 6,000 worth. In July, 1869, exports went on to Agra, Bhawáni, Bijnaur, and by the canal to Cawnpore. The drain towards Ambála, also, continued and did not cease until after the rains of 1869. On the 3rd of September 2,550 maunds of grain were despatched, and the high rates in August, which equalled the rates prevailing during the most critical period (December, 1868), must be due to the same cause. The coarser grains soon became as dear as the finer, for though some relief was given by the *kharíf* of 1868, in February, 1869, *jcár* and *bájra* were offered at higher prices than wheat, and the scarcity of these grains is still more conspicuous in the succeeding months until the demand for wheat in August, 1869, brought the prices once more nearly level, wheat being quoted at 10½ sers per rupee and *joár* at 9¾ sers. The following table shows the prices ruling in the last week of each month during the season of scarcity :—

Months.				Wheat.		Barley.		Eájra.		Joár.		Common rice.		Gram.	
				S.	C.	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.
February,	1869,	...	...	12	2	16	8	11	0	11	0	8	10	11	11
March	,,	...	...	14	7	17	9	11	9	11	9	9	1	12	2
April	,,	...	...	15	11	22	0	11	0	11	9	10	2	12	10
May	,,	...	...	18	15	23	11	...		...		10	7	11	0
June	,,	...	...	16	8	20	14	12	4	9	14	9	14	12	2
July	,,	...	...	12	2	15	6	8	13	9	14	9	5	9	14
August	,,	...	...	11	9	12	11	8	13	11	0	8	4	8	13
September	,,	...	...	11	0	13	7	9	15	13	3	8	13	9	9
October	,,	...	...	11	4	14	13	12	10	15	7	11	0	9	14
November	,,	...	...	10	11	13	3	14	4	17	0	10	7	9	15
December	,,	...	...	10	2	13	3	13	13	17	9	11	0	8	14
January,	1870,	...	...	11	0	13	8	17	9	19	13	11	0	9	15
February	,,	...	...	10	7	13	3	16	0	17	1	11	9	8	14
March	,,	...	...	13	3	13	12	15	15	19	4	11	9	8	13

Building materials.

Kunkur for road metal is scarce in the district. There are only two fair quarries in the Shámli tahsíl, only one in Jánsath and one in the bed of the Soláni in the Muzaffarnagar tahsíl. The distance from these quarries is so great that the kunkur for the trunk road is

brought from the Meerut and Saháranpur districts. First-class bricks 12″ × 6″ × 3″ cost from eight to ten rupees per 1,000; 9″ × 4½″ × 2½″ seven to eight rupees per 1,000, and small native bricks Rs. 2-8-0 per 1,000. Goodwyn's tiles cost Rs. 14 per 100 and Syrian tiles Rs. 12. Stone lime costs Rs. 50 per 100 cubic feet; kunkur lime, Rs. 18, and *surkhi*, Rs. 8. Digging kunkur for roads, cleaning and stacking costs Re. 1-8-0 to Rs. 2 per 100 cubic feet, and cartage costs nine to ten annas per 100 cubic feet per mile. Altogether metalled roads, cost for maintenance twelve to fourteen rupees per mile per mensem, and here the average cost of kunkur placed on the road rises to the very high sum of Rs. 8-8-0 to Rs. 14 per 100 cubic feet, and consolidating the same costs one rupee per 100 cubic feet. Sál logs from the Garhwál forests cost Rs. 2-4-0 to Rs. 2-8-0 per cubic foot, and dressed and placed in position, the costs rises to Rs. 3-12-0 and Rs. 4 per cubic foot. In earthwork, excavating light soil with a lead of 75 feet costs Re. 1-12-0 per 1,000 cubic feet; with 150 feet lead, Rs. 2; and with 200 feet lead, Rs. 2-4-0. Foundation excavations cost Rs. 2-8-0 to Rs. 3 per 1,000 cubic feet. Concrete masonry in foundations cost Rs. 14 per 100 cubic feet and fine concrete costs Rs. 15; whilst first-class brick-work costs Rs. 22, second-class Rs. 20, and third-class Rs. 15. Arch masonry and brick-work in cornices, mouldings and other ornamental work cost Rs. 25 per 100 cubic feet. Best half-inch plaster of stone lime costs Rs. 3 per 100 cubic feet; kunkur lime, Rs. 2-12-0; and white washing, two to three annas. Terrace roofing costs Rs. 3 per 100 square feet: thatching nine inches thick, Rs. 9; tiled roofing, Rs. 6-8-0; and Goodwyn's tiles, Rs. 16. Iron work costs Rs. 16 to Rs. 20 per maund; painting three coats of green Rs. 2 per 100 square feet, or red or white, Rs. 3-12-0 Glazed and pannelled doors are made for from Rs. 85 to Rs. 95 per 100 square feet and panelled doors for Rs. 75 per 100 square feet.

PART III.

Inhabitants of the District.

Population in 1848.

The enumeration of 1848 gave a total population numbering 537,594 souls, of whom 172,304 were Hindu cultivators and 218,341 were Hindús following other callings; 61,445 were Musalmán agriculturists and 85,504 were Musalmáns following occupations unconnected with the cultivation of the soil. The entire population gave 333 souls to the square mile, residing in 934 villages,[1] of which 803 had less than 1,000 inhabitants and 121 had between 1,000 and 5,000. The towns having a population exceeding 5,000 were Muzaffarnagar (7,264), Budhána or Burhána

[1] There were in addition 191 villages without inhabitants (*lá-chirágh*i or "lampless"). The returns of 1848 and those incidentally noticed as having been collected at settlement refer to the permanent residents only, the remainder to all residents in the district on the day the census was taken.

(5,559) Kándhla (7,062), Shámli (8,447), Jalálabad (7,789), Jhanjhána (5,662), Charthawal (5,111), Jánsath (5,312), Kairána (11,470), and Thána Bhawan (11,221). The urban population only numbered 74,897 souls, or about 14 per cent. of the total number of inhabitants. Even amongst these there must have been a large proportion dependent more or less on the land for their subsistence. In fact the towns in this district partake far more of the nature of large villages than of towns proper, and the entire district is essentially agricultural in its character.

Census of 1853.

The census of 1852, better known as the census of 1853 from the year of report, shows a total population numbering 672,861 souls, or 409 to the square mile. There were 490,171 Hindús (221,420 females), of whom 241,246 were engaged in cultivating the soil and 248,925 souls were engaged in other occupations. The Musalmáns numbered 172,690, (39,607 females) of whom 73,943 were cultivators and 98,747 were engaged in avocations unconnected with agriculture. Of the 887 inhabited villages, 717 had a population less than 1,000 and 159 had between 1,000 and 5,000 inhabitants. The towns with more than 5,000 residents were the same as in 1847 with the addition of Míránpur. The changes occurring between 1847 and 1853 resulted in an increase of 10 villages and 7,828 inhabitants, but even deducting these from the total population given in 1853 the increase is striking, and must, in a great measure, be attributable to defective enumeration in the first census.

Census of 1865.

The census of 1865 is more valuable for the purposes of comparison. It gives a total population of all sexes, ages and creeds of 682,212 souls, showing 414 to the square mile. The same broad division into agriculturists and those following other occupations was made, and gives the results shown in the following table :—

Class.	Agricultural.					Non-agricultural.					Grand Total.
	Males.		*Females.*			*Males.*		*Females.*			
	Adults.	Boys.	Adults.	Girls.	Total.	Adults.	Boys.	Adults.	Girls.	Total.	
Hindús, ...	73,539	43,623	56,823	31,081	205,066	94,345	58,345	84,237	49,834	286,761	491,827
Musalmáns and others,	25,584	16,614	21,312	12,296	75,806	35,381	22,652	34,675	21,871	114,579	190,385
Total, ...	99,123	60,237	78,135	43,377	280,872	129,726	80,997	118,912	71,705	401,340	682,212

There were 1,041 villages in 1865, of which 348 had less than 200 inhabitants; 285 had between 200 and 500; 238 had between 500 and 1,000; 106 had between 1,000 and 2,000, and 55 had between 2,000 and 5,000 inhabitants. The towns having more than 5,000 inhabitants were the same as in 1853, except that Budhána was omitted. With 1865 may be compared the figures of 1872, which are as follows:—

Occupations in 1872.

Religion.	*Landowners.*		*Agriculturists.*		*Non-agriculturists.*		*Total.*	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Hindús, ...	6,785	4,910	98,516	73,845	168,748	146,146	274,049	224,901
Musalmáns, ...	4,931	4,406	32,379	26,199	64,226	58,956	101,536	89,561
Christians, ...	...	...	...	...	23	12	23	12
Total, ...	11,716	9,316	130,895	100,044	232,997	205,114	375,608	314,474

The non-agriculturists numbered 438,111 souls, or 63·48 per cent. of the total population in 1872. The details of the census returns of 1847 are not worth reproduction, but those of 1853 and 1865, as the two first enumerations conducted on uniform principles and with defined objects, should have a place in the district notice. Between 1853 and 1865 the changes in area were very small, consisting chiefly of a few villages transferred to the Karnál district. The most noteworthy fact, however, is the apparently great diminution in the agricultural population. There is, however, no reason to suppose that this is due to anything but error in classification. In 1872 day-labourers and the mass of the agricultural population were included in the non-agricultural class, chiefly because their caste-name denoted a trade.

Comparison between the returns of 1853 and those of 1865.

The following table gives the details per parganah for both the census of 1853 and that of 1865 :—

Parganah.		*Hindús.*			*Musalmáns.*			*Total population.*			Proportion of females to every 100 males.
		Males.	Females.	Total.	Males.	Females	Total.	Males.	Females.	Total.	
Muzaffarnagar.	1865,	18,738	15,051	33,789	8,406	7,323	15,729	27,144	22,374	49,518	82·42
	1853,	17,597	14,069	31,666	7,419	6,557	13,976	25,016	20,620	45,642	82·45
Baghra, ...	1865,	18,500	13,963	32,463	5,496	4,951	10,447	23,996	18,914	42,910	78·82
	1853,	17,878	14,447	32,325	5,355	4,711	10,066	23,233	19,158	42,391	82·46
Charthâwal,	1865,	15,781	11,085	26,866	5,976	4,759	10,735	21,757	15,844	37,601	72·82
	1853,	14,953	11,708	26,661	5,828	4,862	10,690	20,781	16,570	37,351	79 74
Púr Chhapár,	1865,	13,407	10,715	24,122	3,873	5,279	9,152	17,280	15 994	33,274	92·56
	1853,	12,716	10,163	22,879	4,537	4,243	8,780	17,253	14,406	31,659	83 49
Gordhanpur,	1865,	7,312	5,793	13,105	825	719	1,544	8,137	6,512	14,649	80 03
	1853,	7,084	5,748	12,832	874	730	1,601	7,958	6,478	14,436	81·4
Jhanjhána, ...	1865,	15,603	12,744	28,347	4,125	3,771	7,896	19,728	16,515	36,243	83 71
	1853,	16,527	13,638	30,165	4,145	3,831	7,976	20,672	17,469	38,141	84·51
Shámli, ...	1865,	25,175	20,848	46,023	5,761	5,072	10,833	30,936	25,920	56,856	83·78
	1853,	28,378	23,216	51,594	5,021	4 666	9,687	33,399	27,882	61,281	83 48
Kairána, ...	1865,	11,174	9,241	20,415	9 084	7,5 1	16,594	20,258	16,752	37,010	82·69
	1853,	9,511	7,916	17,427	8,291	6,892	15,183	17,802	14,8 8	32,610	83·18
Thána Bhawan.	1865,	15,295	12,501	27,796	8,434	7,992	16,426	23,729	20,493	44,222	86 36
	1853,	17,455	14,596	32 051	9,037	8,888	17,925	26,492	23,484	49,976	88 64
Bidauli, ...	1865,	8,005	6,164	14,169	4,943	4,167	9.110	12,948	10,331	23,279	79·70
	1853,	8,906	7,069	15,975	6,059	5,166	11,225	14,965	12,235	27,200	81·76
Shikárpur, ...	1865,	20,703	17,575	38,278	7,035	6,622	13,657	27,738	24,197	51,935	87·23
	1853,	20,977	17,447	38,424	6,672	5,979	12,651	27,649	23,426	51,075	84·72
Kándhla, ...	1865,	25,093	21,366	46,456	9,102	7,059	16,161	34,192	28,425	62,617	83·13
	1853,	23,891	19,946	43,837	6,626	6 063	12,689	30,517	26,009	56 526	85·22
Budhána, ...	1865,	15,432	13,467	28,899	6,010	5,592	11,602	21,442	19,059	40,501	88·88
	1853,	15,548	13,062	28,610	6 021	5 391	11,412	21,569	18,453	40,022	85·55
Khátauli, ...	1865,	17,971	16,191	34,162	6,052	5,429	11,481	24,023	21,620	45,643	89 99
	1853,	18,113	15,006	33,119	5,795	5,437	11,232	23,908	20,443	44,351	85·51
Bhukarheri,	1865,	15,191	12,575	27,766	4,744	4,449	9,193	19,935	17,024	36,959	85·39
	1853,	14,136	11,615	25,751	4,442	4,2	8,669	18,578	15,842	34,420	85·27
Bhúma Sambalhera.	1865,	14,196	12,074	26 269	4,24	3 942	8,183	18,436	16,016	34.452	86 87
	1853,	13,712	11,908	25,620	4,811	4,078	8,889	18,523	15,986	34,509	86·3
Jauli Jánsath	1865,	12,280	10,622	22,902	6,124	5,517	11,641	18,404	16,139	34.543	87 69
	1853,	11,369	9,866	21,235	5,075	4,961	10,036	16,444	14,827	31,271	90·16
Total,	1865,	269,852	221,975	491,827	100,231	90,154	190,385	370,083	312,129	682,212	84·34
	1853,	268,751	221,420	490,171	96,008	86,682	182,690	364,759	308,102	672,861	84·46

Census of 1872.

The census of 1872 shows a total population numbering 690,082 souls and giving 419 inhabitants to the square mile. Of these 498,950 were Hindús, 191,097 were Musalmáns, and 35 were Christians and others not included in the first two classes. There were 883 inhabited villages, giving an average of 0·5 villages to each square mile and 782 inhabitants to each village. The actual classification of villages shows 207 with less than 200 inhabtiants ; 268 with between 200 and 500 ; 233 with between 500 and 1,000; 108 with between 1,000 and 2,000, and 54 with between 2,000

and 5,000. The towns having a population exceeding 5,000 souls were those before given with the addition of Gangeru and Khátauli. The next table gives the parganah details according to religion sex and age :—

Parganahs.	Hindús.				Muhammadans and others not Hindus.				*Total.*	
	Up to 15 years.		*Adults.*		*Up to 15 years.*		*Adults.*			
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Muzaffarnagar,	6,948	5,351	11,275	9,293	3,333	2,647	5,370	4,671	26,926	21,962
Baghra, ...	7,323	5,436	11,239	9,652	2,248	1,858	3,341	3,067	24,151	20,013
Gordhanpur, ...	3,010	2,436	3,514	2,885	361	306	502	380	7,387	6,007
Charthawal, ...	5,553	3,926	8,397	7,041	2,072	1,639	3,346	2,956	19,368	15,562
Púr Chhapár, ...	5,252	4,090	7,865	6,510	2,004	1,743	2,936	2,626	18,057	14,969
Jhanjhána, ...	6,284	4,808	9,367	8,091	1,494	1,270	2,447	2,329	19,592	16,498
Shámli, ...	9,833	7,331	15,637	13,728	1,843	1,533	3,215	2,756	30,528	25,348
Kairána, ...	4,495	3,657	6,524	5,859	3,914	3,227	5,850	5,302	20,783	18,045
Thána Bhawan,	5,946	4,387	9,134	7,843	2,744	2,375	4,631	4,868	22,455	19,473
Bidauli, ...	3,138	2,266	4,617	3,694	2,050	1,594	3,117	2,817	12,897	10,371
Shiláhpur, ...	8,733	6,571	12,567	11,141	2,823	2,432	4,098	3,964	28,221	24,108
Kándhla, ..	11,004	8,406	15,778	13,767	3,341	2,631	4,609	4,304	34,732	29,127
Budhána, ...	6,401	5,155	9,491	8,207	2,707	2,149	3,907	3,567	22,506	19,069
Khátauli, ...	8,006	6,274	12,949	10,867	2,558	2,116	4,063	3,634	26,876	22,391
Thukarheri, ...	6,603	4,968	9,676	8,129	2,098	1,781	3,309	3,009	21,686	17,887
Bhúma Sambalhera.	5,990	4,831	8,779	7,587	1,881	1,553	2,738	2,628	19,388	16,602
Jauli Jánsath, ..	5,671	4,457	7,775	6,734	2,716	2,900	3,893	3,551	20,055	17,042
Total, ...	110,165	84,353	163,884	140,548	40,187	33,144	61,372	56,429	375,608	314,474

This table shows that the number of Hindu males in 1872 was 274,049, or 45·1 per cent. of the entire Hindu population; Hindu females number 224,901, or 54·9 per cent.; Musalmán males 101,536, or 53·1 per cent. of the entire Musalmán population, and Mussalmán females 89,561, or 46·9 per cent. The percentage of Hindús on the total population is 72·3 and of Musalmáns is 27·7, or three Musalmáns to every eight Hindús. The percentage of males on the total population is 54·4, and of females is 45·6, whilst the divisional percentages are 54·0 and 46·0 respectively.

Infirmities.

The statistics relating to infirmities were collected for the first time in 1872. They show that amongst the total population there were 122 insane persons (49 females), or 1·7 per 10,000 of the population; 13 idiots (2 females), or 0·1 per 10,000; 143 deaf and dumb (42 females), or 2·0 per 10,000; 2,538 blind (926 females), or 36·7 per 10,000, and 227 lepers (23 females), or 3·2 per 10,000. The statistics as to age were also collected for the first time in 1872, and exhibit the following results for the Muzaffarnagar district. The table gives the number of Hindús and Musalmáns according to sex at different ages, with the percentage on the total population of the

Age.

same sex and religion. The columns referring to the total population include the inhabitants of all creeds, but preserve the sex distinction:—

Age.	*Hindús.*				*Musalmáns.*				*Total population.*			
	Males.	Percentage on total Hindús.	Females.	Percentage on total Hindús.	Males.	Percentage on total Musalmáns.	Females.	Percentage on total Musalmáns.	Males.	Percentage on total population.	Females.	Percentage on total population.
Up to 1 year, ...	11·822	4·3	10·373	4·6	4·539	4·4	4·175	4·2	16·363	4·1	14·549	4·6
Between 1 and 6, ...	35·763	13·0	29·687	13·2	12·935	12·7	11·679	13·0	48·699	12·9	41·367	13·1
„ 6 „ 12, ...	43·773	15·9	31·191	13·8	15·918	15·6	12·286	13·7	59·693	15·8	43 478	13·7
„ 12 „ 20, ...	46·566	16·9	35·648	15·8	16·881	16·6	14·264	15·9	63·448	16·8	49·915	15·8
„ 20 „ 30, ...	52·608	19·1	43·673	19·4	19·457	19·1	17·697	19·7	72·072	19·1	61·378	9 5
„ 30 „ 40, ...	39·112	14·2	33·229	14·7	14·433	14·2	12·975	14·4	53·550	14·2	46·207	14·6
„ 40 „ 50, ...	24·526	8·9	22·214	9·8	9·241	9·1	8·637	9·6	33·772	8·9	30 851	9 8
„ 50 „ 60, ...	18·073	4·7	12·179	5·4	5·412	5·3	4·957	5·5	18·485	4·9	17·166	5·4
Above 60 years, ...	6·806	2·4	6·707	2·9	2·720	2·6	2·861	3·1	9·526	2·5	9 568	3 0

The proportion of Hindu males under twelve to the total Hindu population is 33·3 per cent., and of Hindu females is 32·9 per cent. Amongst Musalmáns the percentages are 31·7 and 31·4 respectively. Taking the quinquennial periods up to 15 years of age, or 0 to 5, 5 to 10, and 10 to 15 years, the percentage of both sexes to the total population is 14·91, 12·5, and 11·3 respectively, or taking females only, the numbers are 15·2, 12·0, and 10·2 per cent. Here, as in other districts of this division, females are slightly in excess of males in the first period and considerably below them in the other two. In the third period males show 12·3 and females only 10·2 per cent. Again, taking the whole population of the same sex and religion only, the proportion of Hindu males of the ages of 10 to 15 to all the Hindu males is 6·9, and of Hindu females to all the Hindu females is 5·6; whilst Musalmáns show 6·8 and 5·5 per cent. respectively. The proportion of Hindu males of the ages from 13 to 20 to the total of the same sex and religion is 15·6 per cent., and of Hindu females is 14·7 per cent.; whilst Musalmáns show 15·4 and 14·8 per cent. respectively. These results support the conclusion arrived at by Mr. Plowden, that the enumeration of females from 10 to 15 years of age is defective.

Castes.

Distributing the Hindu population, numbering 498,950 souls, amongst the four great classes of the census returns, we have 40,654 Brahmans (18,212 females), 15,470 Rajpúts (6,130 females), 42,199 Baniyas (19,106 females), and all other castes numbered 400,627 souls, of whom 181,453 were females. Amongst the Brahmans

Brahmans.

38,323 belonged to the great Gaur tribe of the Gaur division; there were 72 Sanádhs, 384 were Achárajs,

109 were Bhâts, 223 were Dakauts, 332 were Kanaujiyas, 441 were Sarasvats, and 155 were Sarwariyas. Besides these clans there were a few belonging to the Bhâraddhvaj, Gujráti, Kashmíri, Mahírást, Shaivi, and other subdivisions. The Maithila Brahmans form a tribe of the great Gaur division and are found scattered in small numbers in almost every district. The tribe has four divisions:—Maithil, Sárátri, Joga and Chaugola, and is very numerous and powerful in its proper home, Tirhút and the adjoining districts of the Benares division.

Maithils.

The Sárasvats are also a tribe of the Gaur division of Brahmans, and are named after the sacred river Sárasvati, now a dry nála, but once a broad river which watered fertile plains and rich fields in the early home of the Aryans to the west of the Jumna There can be no doubt that these Sárasvats are one of the oldest of all the Brahmanical tribes, and represent a division which has come down from the remotest antiquity. The subdivisions of the tribe in these provinces are the following:—Báwanjáti Sárasvat, Ashtbans Sárasvat, Shatbans Sárasvat, Panjajáti Sárasvat, Báhari, Bhunjáhi, Kashmíri, Dogare, and Súradhvaj. The first of these, as its name implies, includes fifty-two clans; the second has eight clans; the third six clans, and the fourth five clans. The more common subdivisions found in this district are the Kashmíri, Súradhva, jand Báwanjáti. Amongst the clans of the Báwanjáti the following titles occur:—Basúde, Bijara, Rande, Merha, Mustál, Angal, Súdan, and Hastír. The Parásur *gotra* of the Panjajáti subdivision has the title Tikkhe, the Bhárgav *gotra* has the title Kamariya and the Gautam *gotra* has the title Jhingan. Amongst the Ashtbans clans are the Bh raddhvaj with the title Páthak; Kásyap called Sori, Gautam called Tiwári, Parásur called Shand, and Suvarniya called Bháraddhvaji. Amongst the Báhari clans are the Kisnátri with the title Sárada, Garg with the title Nárada, Sandel with the title Nábha, and Monas with the title Chitrkotiya, besides numerous others. Sárasvats or Sárasúts are numerous in the upper Duáb. In 1872 there were over 6,000 in the district of Dehra Dún and over 2,000 in Meerut. They are amongst the most respectable of the Brahman families, and still, to a certain degree, preserve their ancient simplicity of manner.

Sárasvats.

The Ráhtís or Bohras are sometimes classed amongst the subdivisions of the Gaur tribe of the great Gaur division, under the name of Palliwáls, but they are now so completely separated from the Brahmans as a body that they are usually regarded as one of the miscellaneous tribes of Brahmanical origin. Other names for this tribe are Athwariya, Bárhar, and Káinya. These Bohras are immigrants from Márwár, and are called Palliwál from their original seat, Palli. They are the great usurers and pawnbrokers of the upper Duáb, and are a wealthy, pushing unscrupulous race who have made good use of the opportunities afforded by our

Bohras.

courts to obtain possession of a considerable amount of landed property. They are detested for their roguery and trickery, and the derivation of the names by which they are known shows the estimation in which they are held. "The continually revolving nature of their dealings," writes Sir H. M. Elliot, "and monthly visits to each of their debtors, have, with reference to the constant revolutions of the Persian wheel *(ráhat)* and buckets, procured them the designation of Ráhtís or Ráhatís." The name Bohra is derived from '*beohár*' or 'trade,' and may be rendered as 'the trader.' The name Athbariya or Athwariya, which signifies 'weekly,' refers to a person who transacts his business weekly, and to the Bohras who collect their interest every week, a practiced followed by the Ráhtís when they first came from Márwár and settled in these provinces towards the close of the last century. Bárhar similarly refers to the division of the tribe who used to collect their interest every day. The name Káinya is due to their frequent use of the word '*káin*,' 'why,' 'wherefore,' in their daily transactions. Palli in Márwár was held by a community of Brahmans who invited Shiují and Setrám, the grandsons of Jaichandra, the last Ráthor ruler of Kanauj, to assist them against the Mínas and Mairs of the hills around Palli. The Ráthors accepted the invitation, defeated the Mínas, and, in reward, received lands in Palli which thus formed the nucleus of their possessions in Márwár.[1] The Ráthors soon added to their first acquisitions the lands of the Brahmans by the murder of the heads of the community during the *holi* festival. The survivors remained in their ancient home and devoted themselves to commerce, so that in a short time Palli became the great commercial mart of western Rajwára, electing its own magistrates both for municipal regulations and the arbitration of all matters connected with their commercial pursuits, and having a mint of its own. Subsequently, when Márwár was devastated by the Muhammadans, the Raja called for a general contribution, which the Brahmans of Palli refused on account of their caste. The Raja was enraged at this and placed a number of their headmen in confinement, and in revenge many of the Brahmans committed suicide, but instead of being terrified at having caused the deaths of so many Brahmans, the Raja expelled them from his territories, and the Palliwáls emigrated to Bikanír, Dhár, Jaisalmer, the Sindh valley, and these Provinces. Sir H. M. Elliot separates the Káinyas and Ráhtís from the Bohras, and calls the former an inferior class who "lend money to agriculturists and others in a small way, generally by tens, and for every ten rupees take a bond for twelve rupees, payable by instalments of one rupee per mensem." The Bohras have larger dealings with the higher classes, and, like the Ráhtís, are eager to acquire possession of profitable estates. There is, however, this difference between the two, that while Ráhtís will only take money for money, the Bohras are ready to receive

[1] Tod's Rajasthan II. 12; I., 601.

property as well in exchange. In Bombay many have become Musalmáns and form an important section of the trading community. Tod says that the Palliwáls never marry out of their own tribe and give a sum of money for their wives. They worship the bridle of a horse, a custom which leads Tod to identify them with the priests of the Skythian-Palli race. Unlike other castes Palliwáls eat and drink with the Mahábrahman tribe, who accept gifts for the dead thirteen days after death, a practice which is held in great disrepute by all other classes of Brahmans. In this district, during the currency of the past settlement, Bohras have acquired by purchase 7,788 acres of land chiefly in parganahs Muzaffarnagar, Bhukarheri, and Charthawal.

Rajpúts.

Amongst the Rajpúts the most numerous tribe is the Chauhán (4,998). Next comes the Pundír (4,942), Jhotiyána or Jhatiyána (2,106), Bisen (631), Súrajbansi (625), Polast (329), which is really a clan of the Pundír tribe, Kachhwáha (533), Gaharwár (272), Dhákara (173), Chhonkar (149), Badgújar (167), Baranwár (149), Tomar (105), besides small numbers of the Bais, Bithú i, Banáphar, Chandrabansi, Gahlot, Gaurahar, Gaur, Jádubansi, Kharg, Ráthor, and Rajwár clans. The Pundírs or Purirs are of the same tribe as those in Saháranpur and form an important element of the Rajpút population in Aligarh, where a colony from Saháranpur made an early settlement. The Bisens claim to be descendants of the same stock from which the Raja of Salempur Majhauli, in the Gorakhpur district, is descended. Those in this district are petty agriculturists, chiefly of the Parásur *gotra*. The Baranwárs are an obscure tribe, probably a *gotra* of some forgotten tribe, and are called after the town of Baran or Bulandshahr. Gaharwars connect themselves with the dynasty of that clan which once ruled in Kanauj. The Gaurahars are an obscure tribe, here said to be descended from the Chamar Gaurs, and to have some connection with the Ahírs. Gahlots and Chhonkars are noticed under the Aligarh district, Jádubansis under Muttra, Banáphars under Hamírpur, Ráthors under Eta, and Pundírs under Saháranpur. Here, as eleswhere, there are numerous minor castes of obscure origin, many of which have arisen from social differences caused by marriage contrary to caste rule and from breach of caste etiquette. These new castes have by degrees both in number and in influence attained to the position of separate tribes, and have in their turn given rise to fresh subdivisions.

Kachhwáhas.

The Jhotiyánas or Chhotiyánas about Jaula are by common consent Kachhwáhas of the original stock and Kasyap *got*, and are probably the same as the Kachhwáhas of the Antarbed (dúb) who are so frequently mentioned by Chand as the allies of Prithiráj. They are, too, said to have assisted Vísala Deva in his invasion of Gujrát in the middle of the eleventh century, and, in any case, must have been amongst the earliest Rajpút colonists of the district. The name Jhotiyana is said to be

derived from Jhotwára in the Jaipur State, whence they came here, and they once held a chaurási, with a Raja of their own, at Tisang. Kachhwáhas are also found in Meerut, Bulandshahr, Etawah, Aligarh, Eta, and Jalaun. To the north-west of the district, close to the Saháranpur border, there is a *chaubísi* (or colony of twenty-four villages) held by Chauhán Rajpúts. These villages cluster around Chausána, the parent village, and are still for the most part in the hands of their founders. The Chauháns trace their origin to Prithiráj, and through him to Sámbhar. Near the junction of the Hindan with the west Káli Nadi there is a *chaubísi* of Rajpúts of the Somwál or Sombansi clan and Atri *got* comprising eight villages in this district and sixteen villages in the neighbouring district of Meerut. Their principal village in this district is Inchhauli, and in Meerut is Burhadána.

Chauháns.

Baniyas chiefly belong to the Agarwál (37,354), Chhoti Saran (1,824), Mahesri (177), Bishnoi (155), Saraugi (1,592), Agrahri, Dasa, Gata, Gindauriya Dusri Saran, Rastaugi, Rorh, and Raja-ki-barádari subdivisions. The Dasa is the same as the Raja-ki-barádari, and is a subdivision of the Agarwál division. It obtained the second name from one Ratan Chand Dasa, a resident of Miránpur, who rose to distinction and high office under the Sayyids of Jánsath during the reign of Farrukhsiyár. The Dasas are descendants of a slave-girl of Ugrasen and are divided into Dasas and Kadími Dasas. Many of the former are Jainas, but this difference in religion does not prevent them from eating and drinking together or intermarrying. The Bishnoi Baniyas are more a religious sect than a tribe and are recruited from various tribes, including Rajpúts, Brahmans, and Baniyas. The Rorhs have three divisions—the Khattrí, Lahauri, and Rorh, and are chiefly *arhats* and *daláls* (or brokers). Mahesris are of the Jaina sect. Agrahris seem to be a mixed caste and wear the sacred thread. They are more numerous in the Benares division than in the upper Duáb, and are divided into several classes, such as the Uttaráha, Pachháwan, Banárasi, Pánchara, Dálámau, Mahuliya, Ajudhiyabási, and Chheánawe. The Rastaugis trace their origin to Amethi in Oudh, and are divided into the Amethiya, Mauháriya, and Indrapatiya classes. The Gindauriya and Gata are obscure subdivisions of the Baniya class, of whose origin nothing is known. All through the upper Duáb, the Agarwálas and their divisions—the Pachhain, Purbiye, Dakhinádhí, Utarádhi, Churáwále, Jaisalmeriye, Dasa and Pancha—are the most prominent, numerous, active and intelligent portions of the trading community.

Baniyas.

The Jainas form one of the most important sections of the mercantile community, and for their influence and wealth are particularly deserving of notice. They allow of

Jainas.

eighty-four *gachhas* or *gotras* in these provinces, the names of which are as follows[1]:—

Oswál.	Sád.	Lameru.	Giradhwál.
Srin ál.	Dhundiya.	Máhura.	Nikajjala.
Sri Srimál.	Padmávati Panwar.	Golálára.	Khandiya.
Srimáli Pattan.	Jaisala.	Barhanúra.	Parwár.
Porwál.	Golabáre.	Mágadhi.	Samaiya.
Khandelwál.	Húmar.	Bahári.	Jhamaiya.
Palliwál.	Kumanera.	Badgújara.	Chausake.
Agarwál.	Janachera.	Ghurlawál.	Dusake.
Lohiya.	Grihapati.	Baghelwál.	Asethi.
Jaiswál.	Naimáwár.	Saurati.	Bákase.
Bhábhara.	Kharana.	Murlawál.	Golarágháre.
Lamechu.	Barhela,	Chitoriya.	Pataniya.
Golárára.	Mahelwál.	Bankpol.	Durhiye.
Thadiya.	Addhowál.	Barhgi.	Ramaiya.
Bagherwál.	Pukviwál.	Puriya.	Barajátiya.
Mahesri.	Poswál.	Bhuriya.	Srípála.
Golapurab.	Kharewál.	Mewáriya	Bisasri pála.
Dasa.	Marewál.	Ayodhyabási.	Khaola.
Gújar Gaur.	Varahiya.	Karnágara.	Bareliwál.
Gola.	Nema.	Charnágara.	Kanaujiyá.
Mudela.	Girnárwál.	Katharal.	Kapúrjút.

Most of those *gachhas* do not eat together, nor can they intermarry with each other. Much has been written about the Jainas, both in India and in England, by Colebrooke, Buchanan, Stevenson, Ward, Delamaine, Franklin, Wilks, Erskine, Dubois, and others, but the best and most useful account of the sect in Upper India is that given by H. H. Wilson, from whose notice I shall give a short account of their tenets and position. I have made several efforts to obtain some local information regarding their customs in Meerut, but failed to gather any but the vaguest statements which were entirely worthless for record.[2] The Jainas are divided into two principal divisions, the Digambaras or sky-clad, *i. e.*, naked Jainas, and Svetámbaras or white-robed. The teachers of the former division, however, no longer go naked, but wear coloured garments, and confine the disuse of clothes to the time of eating, when they throw off their wrapper when receiving food from their disciples. Besides these two great divisions there are several minor ones, but the differences in doctrine and practice are trivial and of little import. Amongst them mention may be made of the Múla Sanghís, who use brushes of peacock's feathers, wear red garments and receive alms in their hands: the Kashta Sanghís, who make their images of wood and employ brushes of the tail of the yák; the Terah Panthís, Bís Panthís, Bhíshana Panthís, Dundiyas and Samvegís. Besides these denominations all Jainas are divided into Yatís and Srávakas, the former of whom lead a religious life, depending upon the alms of the latter. Many Yatís are

[1] These names differ slightly from those given in H. H. Wilson's list, and are taken from a "Barnamála" published in Benares. [2] See H. H. Wilson's works (Ed. Rost.) I., 276, in which a summary of the bibliography of the Jaina literature is given. He also refers to Colebrooke's Essays 243, 281; Catalogue of the Makenzie MSS.; Trans, R. A. Soc. London, I., 418, 520, 531,; II, 270; Calc Quart. Mag. Ward's Hindoos; Buchanan's Travels in Mysore; Wilks' Historical Sketch of the South of India; Erskine's Journal, Bombay Literary Society, &c. Their great place of pilgrimage in the Upper Doáb is Hastinápur.

engaged in trade or possess *maths* and *mandirs*, but they never officiate as priests, leaving this to a properly trained Brahman. The Yatís are sometimes collected in *maths*, called by them *poshálas*. The secular Jainas in these provinces worship almost exclusively Parasrám (Parsvanáth) and Mahábír (Mahávíra Svámi or Varddhamána) the twenty-third and twenty-fourth Tírthankaras of the present age. Their temples generally consist of an oblong or square room surrounded by an open portico. On one side is an altar-piece of several stages, and in the centre of the upper tier sits the principal deity supported by two other *arhats*, while the remainder are ranged upon the lower tiers. The spire is usually arranged in compartments like leaves and is surmounted by a pole resembling a flag-staff which terminates in a gilt knob. The Jaina temple at Háthras is a particularly fine building.

Literature and tenets.

The Jaina works in the various languages spoken by them are exceedingly numerous and voluminous. Like the Hindús, they have a series of works called Puránas, giving the legendary history of their Tírthankaras or deified teachers; such are the *Ádi*, *Uttara*, *Chámúnda Ráya* and *Chaturvinsati* Puranas. Other classes of works are the *charitras*, which are generally devoted to the marvellous history of some Tírthankara or other holy personage, as the *Pájyapáda Charitra*, &c. The Jainas have also their writers on philosophy, grammar, astronomy, medicine, physics, and mathematics, so that, altogether, their literature affords ample materials for a description of their tenets and religious customs. Mr. H. H. Wilson gave a list of over one hundred Jaina works either in his possession or in the library of the Sanskrit College in Calcutta, and mentioned the existence of a number of works called *Siddhántas* and *Agamas*, which are to the Jainas what the Vedas are to the Hindús. Hemachandra, a Jaina writer of the twelfth century, calls the principal authorities of a sacred character acknowledged by the Svetámbaras, *Angas*, of which there are eleven, or with a supplementary division, twelve. With these are connected the *Upángas* or inferior *Angas* and the *Púrvas*, which are so called because they were drawn up before the *Angas*. These last are fourteen in number, and treat of the chief tenets of the sect on moral subjects. These writings have never yet been thoroughly examined, and only very small portions of them have been edited and explained, so that our knowledge of the religious history of this important sect is as yet far from complete.

Tenets of the Jainas.

The tenets which chiefly distinguish the Jainas from the Hindús are, briefly, their denial of the divine origin and infallibility of the Vedas; the reverence paid by them to the saints who have by their self-denial and austerities attained to a position superior even to the gods, and their extreme tenderness of animal life. Their disregard of the authority of the Vedas is common to the Jainas with the followers of Buddha, and involves a neglect of the rites which they prescribe.

In fact it is these rites which necessarily include some disregard of animal life that impugns the sanctity of the Vedas themselves in the eyes of the Jainas. The worship of holy men is also common to both Jainas and Bauddhas. The latter out of their celestial hierarchy usually confine their devotions to seven Buddhas; the Jainas extend this number to twenty-four, and enumerate twenty-four of their past age or *Avasarpini*; twenty-four of the present age and twenty-four of the future. The twenty-four of the present age are :—

No.	Name.	Symbol.	No.	Name.	Symbol.
1	Adináth or Varishabha,	Bull.	13	Vimalanáth, ...	Boar.
2	Ajitanáth. ...	Elephant.	14	Anantanáth or Anantajita.	Porcupine.
3	Sambhunáth, ...	Horse.			
4	Abhainandanáth, ...	Monkey.	15	Dharmanáth, ...	Thunderbolt.
5	Sumatináth, ...	Chakwa-chakwi	16	Santanáth, ...	Antelope.
6	Supadmanáth or Padmaprabhu.	Lotus.	17	Kanthanáth, ...	Goat.
7	Suparswanáth or Suparasa.	Sivástika.	18	Aranáth, ...	Fish.
8	Chandraprabhu, ..	Crescent moon.	19	Mallináth, ...	Pinnacle.
9	Pushpadánta or Suidanáth.	Alligator.	20	Munisuvrata, ...	Tortoise
10	Sitalanáth, ...	Tree or flower.	21	Namináth, ...	Lotus with stock.
11	Sri Ansenáth or Sriyasa,	Rhinoceros.	22	Nemináth, ...	Shell.
12	Vasupadya or Vasupujya.	Buffalo.	23	Parswanáth or Parasnáth.	Serpent.
			24	Varddhamána or Mahábír.	Lion.

But of these the twenty-third and twenty-fourth, or Parasrám and Mahábír, have superseded all their predecessors and engross the devotions of the Jainas of the present day. The generic names applied to these saints show the Jaina notions of their attributes. The saint is *Jagatprabhu*, or lord of the world; *Tirthakara*, or one who has passed over (*tiryate anena*), that is, the world compared to the ocean; *Kevali*, or the possessor of *kevala*, or spiritual nature; *Arhat*, or one who is entitled to the homage of gods and men; and *Jina*, or the victor over all human passions and infirmities. Besides these general epithets there are others of a more specific nature referring to the form of the body, voice, hair, nails, &c., and his superhuman powers. Each of the twenty-four Jinas, too, are distinguished from each other in colour, stature and longevity. Two are red, two white, two black, and the rest are of a rich yellowish brown. Each, in order, decreases in size and age until the last but one Jina, like the last Buddha, lives only one hundred years, and the last Jina seventy-two years.

Mahábír.

Mr. H. H. Wilson gives a summary of the life of Mahávíra or Mahábír from the *Mahávíra Charitra* of Hemachandra. The first birth of Mahábír took place at an unknown time as Nayasara, the head-man of a village in the country of Vijaya. His next was as Marichi, the grandson of the first Tirthankara Rishabha. We next find

him as Visvabhúta, prince of Rajágriha; then as Vasudeva, the foe of Hyagriva. He then successively became a lion, a Chakravartti Raja, the devotee Nandana, and finally the Tírthankara Mahávíra, born in a family of the line of Ikshváku at Pavana in Bharata Kshetra. Mahábír early adopted an ascetic life, following the tenets of the Digambara division, and living chiefly in Behár and the adjacent provinces. During his wanderings he visited Rájagriha, Srávasti, Vaisáli and Kausámbhi, and in the last place attained to *kevala* or spiritual knowledge, the only knowledge. He then proceeded to Apápapuri in Behár, where he began his instructions and secured many disciples from among the Brahmans, the most celebrated of whom was Gautama or Indrabhuti, whom some identify without reason, with the Gautama of the Bauddhas. From the conversations between Mahábír and his disciples it would appear that they recognised the vital principle as a real existence animating, in distinct portions, distinct bodies, and condemned to suffer the consequences of its actions by migrations through various forms. "The reality of elementary matter is also asserted, as well as of gods, demons, heaven and hell. The final state of the vital and sentient principle is left rather obscure, but as its actual and visible exemption from human acts is taught, it follows that it is exempt from their consequences or repeated births in various shapes, and, therefore, ceases to be in any sensible or suffering form."

Mahábír, then, attended by his followers, wandered about to various places disseminating the Jaina tenets and making numerous converts. He again came to king Sasánika of Kausámbhi, in the modern district of Allahabad, and remained with him many days. Thence he returned to Apápapuri with a following of Sádhus and Sádhwis, or holy men and women; Sramanas, or ascetics versed in the fourteen Púrvas; Avadhijnánís, or those who know the limits or laws; Kevalís, or those detached from acts; Manovits, possessors of intellectual wisdom; Vadis, controversialists; and Srávakas, the male laity. Mahábír died at Apápapuri on the day of the new moon of Kárttik, in the seventy-second year of his age. In a passage in his life it is prophesied that when 1669 years have elapsed from the death of Mahábír, Kumára Pála of Anahilla Pattan in Gujrát should become a convert to the worship of Jina. The conversion of Kumára actually took place about 1174 A.D., so that the death of Mahábír, according to Hemachandra, must have taken place about 495 B.C.; other Jaina authorities from the south of India give the date as 663 B.C., and some from Bengal as 636 B.C.

General view of Jaina belief.

The leading tenets of the Jaina belief may now be briefly described. They do not acknowledge a first cause, nor do they admit of soul or spirit as separate from the living principle. All existence is divisible into—life' *(jíva)* or the living principle, and inertia *(ajíva)*, or the various modifications of inanimate matter. Both

are uncreated and imperishable. Again, all objects are arranged under nine *tattwas* or categories, truths or existences :—(1) *jíva* or life in its various forms subdivided into those with mobility as animals, men, &c., and those without, as the products of the four elements, plants, &c. (2) *Ajíva*, or objects and properties devoid of consciousness and life. (3) *Puny a*, or good, whatever is the cause of happiness to living beings. (4) *Pápa*, or ill, as opposed to the preceding. (5) *Asrava*, or the sources from which the evil acts of living beings proceed, including the organs of sense, passions, evil acts, evil pursuits. (6) *Samvara*, which is that by which acts are collected or impeded, such as attention, endurance, secrecy, &c. (7) *Nirjara* is the religious practice that destroys mortal impurities or penance. (8) *Bandha* is the integral association of life with acts as milk with water, fire with tow, &c. ; and (9) *Moksha*, or the liberation of the vital principal from the bonds of action. "From the details of these nine *tattwas*," writes Mr. Wilson, "the whole Jain system may be collected, but the form only the text on which further subtleties are founded, and they leave the end and scope of all the doctrine or the attainment of ultimate liberation singularly indistinct. The *moksha* or *nirván* of the Jains is exemption from the incidents of life, and, above all, from the necessity of being born again ; but in what state the living principle subsists after it is so exempted does not very satisfactorily appear." In one state, indeed, the bodily individuality remains, and in others the Siddhas) the pure existences correspond with our notions of spiritual existences having an impassive and inappreciable form. Mr. Colebrooke observes :—"It is not annihilation but unceasing apathy which they (Jainas and Bauddhas) understand to be the extinction of their saints and which they esteem to be supreme felicity worthy to be sought by practice of mortification as well as by the acquisition of knowledge."

Differences of ritual.

All Jainas believe in the essential principles declared in the *tattwas*, but there are some differences in the practices of the Svetámbaras and Digambaras, and in the duties of the lay and religious orders. The Svetámbaras decorate the images of the Tírthankaras with ornaments of gold and jewels, a practice in which they are not followed by the Digambaras. The former say that there are twelve heavens and sixty-four Indras, while the latter increase the number of heavens to sixteen and the number of deities to one hundred. The Svetámbaras allow their spiritual guides to eat out of vessels, while the Digambaras feed their preceptors with their own hands. The Digambaras deny that the brush, waterpot, &c., are essential to the character of an ascetic, and they assert that no woman can obtain *nirván*, and that the *Angas* are not the work of the immediate disciples of the Tírthankaras, but of subsequent teachers or Achárya. The Yatís or clerical section of the Jainas are expected to follow a life of abstinence, taciturnity and continence, while the Srávakas or lay portion worship the saints and all holy men. They all hold

that there are five great duties *(mahávratas)*: refraining from injury to life, truth, honesty, chastity and freedom from wordly desires: four great merits *(dharmas)*, liberality, gentleness, piety and penance; and three sorts of restraint: government of the mind, body, and tongue. To these some minor instructions of a formal nature are added as purificatory and ceremonial. On the whole, the system is calculated to produce a quietism which renders the believer regardless of what may happen both here and hereafter.

The system of worship is simple. A Yati may dispense with ceremonial observances, and a lay Jaina need only visit the temple once a day, walk round it three times, bow to the images of the Tírthankaras, and offer some flowers or fruit with a *mantra* such as the following:—"*Namo Arihantánam, Namo Siddhánam, Namo Aryánam, Namo Upájyánam, Namo Loen Sabba Sadhúnam.*" "Salutation to the Arhats, Siddhas, Sages, Teachers, and to all the holy, devout persons in the world." A morning prayer is also repeated:—"*Ichchhámi khama samano bandiyonjo manjáye nisiáye, máthena vandámi.*" "I beg forgiveness, O Lord, for your slave; whatever evil thoughts the night may have produced, I bow with my head." A portion of some holy book is then generally read by a Yati, after which the worshipper proceeds to his home. The priest and attendant on the images is a Brahman. The Jains do not deny the existence of the Hindu gods, and both Devi and Sárasvati are worshipped by them in these provinces, in subordination, however, to Parasrám and Mahábír. The only rites followed on births are the marking the top of the head with perfumes and sandal twelve days after birth. Marriage and cremation ceremonies are much the same as with Hindús, except that the Vaidik *mantras* are omitted. Parasnáth and Pápapuri in Bengal, mount Abu in Ajmer, and Girinár in Gujrát are the great Jaina shrines. Their holidays commemorate events in the lives of their saints, but they also observe the Basantyátra, Sripanchami, and the second, fifth, eighth, eleventh and twelfth days of the lunar month. On these days no new work should be commenced, no journey should be undertaken, and fasting and continence should be observed.[1]

Other castes.

The following list gives the names and the numbers of "the other castes" of the census returns arranged in alphabetical order, and includes all the Hindu castes which have not been placed under the previous three divisions. The classification appears to be very imperfect, for there are many clans given here which appear to be mere *gots* of

[1] I must refer to Mr. Wilson for his note on the origin of the Jain faith (Works, I, 323) and its connection with Buddhism. He writes:—"That it is the most recent of all the systems pursued in Hindustan is rendered highly probable by the extravagances in which it deals, byt he doctrine it opposes to those of all other schools, and by the comparatively recent date of many Jain authors of celebrity and of monumental relics, but at what period it actually took its rise it is not easy to determine." He admits them to be a distinct sect ten or twelve centuries ago, but questions their being of any note or importance at a much earlier time.

clans really belonging to the Brahman, Rajpút and Baniya subdivisions, such as Bohras, Dhusars, Chauháns, Jaiswárs, &c. :—

Aheriya,	...	47	Jaiswár,	...	25	Patwa,	...	199
Ahír,	...	568	Ját,	...	66,759	Ramaiya,	...	15
Bangar,	...	10	Juláha,	...	9580	Rangar,	...	5
Banjára,	...	3,451	Káchhi,	...	193	Rawa,	...	124
Barhia,	...	10,461	Kahár,	...	40,452	Riwári,	...	37
Bawariya,	...	610	Kalál,	...	1,774	Saisi,	...	1,163
Bhaddri,	...	384	Kamboh,	...	1,004	Saini,	...	16,485
Bhand,	...	11	Kanjar,	...	48	Siál,	...	1,578
Bharbhúnja,	...	1,985	Kánpri,	...	36	Shoragar,	...	26
Bhát,	...	1,140	Káyath,	...	863	Shutarban,	...	20
Bohra,	...	630	Khákrob,	...	26,726	Sikh,	...	14
Chamár,	...	96,921	Khatík,	...	1,583	Sonár,	...	4,250
Chhípi,	...	1,594	Khattri,	...	908	Sud,	...	6
Chauhán,	...	201	Koli,	...	549	Tagá,	...	11,947
Dabgar,	...	1	Kumhár,	...	12,966	Tamoli,	...	24
Darzi,	...	1,803	Kúrmi,	...	15	Teli,	...	16
Dhanak,	...	189	Kuzahgar,	...	15	Thathera,	...	181
Dhobi	...	790	Lodha,	...	11,18	Vaishnu,	...	81
Dhuna,	...	80	Lohár,	...	43,83	Bairági,	...	620
Dom,	...	41	Mimmár,	...	522	Barwa,	...	124
Dhusar,	...	9	Máli,	...	7,965	Fakír.	...	636
Gadahia,	...	27	Malláh,	...	122	Gosháin,	...	1,193
Gadaria,	...	13,107	Meo,	...	1	Jogi,	...	9,059
Ghosi,	...	1	Mochi,	...	233	Gúrkha,	..	2
Gola,	...	157	Nat,	...	456	Gond,	...	11
Gújar,	...	24,899	Orh,	...	6,874	Purabiya,	...	70
Hajjám,	...	8,448	Pási,	...	2			

The Banjáras are scattered throughout the district in small colonies and are now almost entirely tillers of the soil; as cultivators they are still very backward, and in their small impoverished settlements, carts are only now beginning to come into use.

Bauriyas.

The Bawariyas (Bhowreeahs) or Bauriyas or Bhauriyas claim descent from Rajpút fathers and trace their origin to Bikanír. They were probably included amongst the predatory tribes inhabiting the hill country south of Dehli, mentioned by the Muhammadan historians under the generic name of Mewátís. The branch that ultimately made its way into the Duáb is said to have sojourned for a time at Lálki, west of the Jumna, and appears to have first attracted attention by its wanderings in this direction about a hundred years ago during the decline and downfall of the empire. They say that they were originally Rajpúts and explain their fall from their high estate as follows:—"Once upon a time, their remote ancestor, Amr Singh, a mighty hunter of the genuine Chauhán stock, a resident of Márwár, went out for a day's sport in the jungle. A deer passed, so he drew his bow and let fly an arrow, but as bad luck would have it, it missed the mark and hit Sri Thákur (apparently the Bauriya representation of the 'Supreme Power,' Bhagwán) who happened to be reposing at the foot of a tree. Sri Thákur, smarting with pain, incontinently cursed him, calling him '*bauriya*' or '*báuri*' (synonymous, it appears, with 'you stupid oaf!'),[1] and added a pious wish that he might never have a roof to cover his head with. Amr Singh's fault was visited upon

[1] From a note by Mr. G. Williams, C.S., and the official reports.

the heads of his children, fourteen in number, seven daughters and seven sons, who gave their names to the seven *gots* of the Bauriyas, *viz.*, Koli, Parwár, Solankhi, Debás, Chauhán, Dhandál, and Badhiára. Two other *gots* peculiar to the Panjáb are the Chárun and Dhandhára. In marriage the only prohibited *got* is that of the father, and *karáo* is prevalent. Others say that in the olden time two notables, brothers, presented tho king of the period with one of their daughters at a darbár. The potentate, being exceedingly delighted, told them to ask for any favour they might wish. The one with prudent foresight demanded a substantial *jágír* of land; the other, a careless sort of fellow, simply asked to be allowed to do whatever he pleased and dispose of his time as seemed good in his own eyes. He accordingly became a thief and founded the Bauriya community. The sun (Suraj or Naráyan) is a universal object of worship with all Bauriyas, but each *got* also has its special deity. For instance, those of the Koli *got* adore a demon called Dhera Deota, whose shrine is at Chítor; the Chauháns worship the *devi* of Jawálamukhi; the Dhandháls, Kála Dás, who is probably identical with the Kála Bába of the Chamás; and the Badhiáras Nar Singh, the equivalent to Naráyan, whom the Parwárs, Solankhis, and Debás prefer to call Goshain. They naturally regard the Brahmans with becoming reverence, but any drunken Bairágí does equally well for a *guru*, if not better. Still the birth of a child is celebrated by a distribution of alms to the Brahmans whenever possible. At the time of betrothal, the intended bridegroom's father has to pay Rs. 7 to the girl's father, and marriages are celebrated with feasting and presents of ornaments to the bride at a cost of from Rs. 20 to Rs. 100. A widow invariably marries again if she possibly can, and no restriction is placed upon divorce. No food whatsoever is prohibited, and their social system is, in short, that of primitive savages."

The following is a list of some of the peculiar words used by them :—

Bread,	*Túk* or *roto.*	Knife,	*Churyán.*
Man,	*Mánkho.*	Sword,	*Turyár,*
Woman,	*Manshi.*	Sleep,	*Khúigyon.*
Body,	*Wáliya.*	Die,	*Marigyon.*
Girl,	*Kuwárni.*	Horse,	*Ghoro.*
Mother,	*Ai*	Buffalo,	*Bhínkh.*
Father,	*Aga.*	Bullock,	*Dhándho.*
Son,	*Dikra.*	Cloth,	*Lúgron.*
Daughter,	*Dikri.*	Bread,	*Dhádhi.*
Food,	*Khaildi.*	Eyes,	*Dhola, ankhi.*
Drink,	*Píldhon.*	Face,	*Bákon.*
Eat,	*Khaildhon.*	Feet,	*Golo.*
Walk,	*Hindon.*	Legs,	*Godo.*
Plough,	*Hulh.*	Head,	*Mándh.*

Efforts at reformation.

The history of the experiment commenced by Mr. S. N. Martin, C. S., with a view to the reformation of this tribe by locating them as cultivators in the villages of Khánpur, Allahuddínpur, Kheri, &c., in parganah Bidauli, has been the subject of many reports and much correspondence. Inquiries regarding the Bauriyas began in 1855, when Khairuddín

Ahmad found that a very large number of men, known as Dehliwál Bauriyas, were settled in villages in this and the Saháranpur district under separate and several leaders. These gangs thrived under the protection of the zamíndárs of the villages in which they lived. Every year at the close of the rainy season they left on thieving excursions for different parts of India, travelling even as far as Calcutta, Indore, and other distant places in search of plunder. Their practice was confined almost entirely to the plunder of tents and carts laden with grain and merchandise, and they never attempted robbing by open violence or resorted to force except under necessity for defence or escape. They were, however, very successful, because very expert in cutting entries into tents and abstracting parcels or bales from the bullock-train or other carts. It was also found that the owners of their villages helped them by providing food, and even the luxuries as well as the necessities of life for the families of those who had gone on long excursions. They not only did this but were ever ready to give evidence as to character in order to refute accusations and to give security for good behaviour where such was demanded. In return for the protection thus afforded they received high interest for their advances and no inconsiderable share of the plunder. The administrative measures which ensued were stopped by the mutiny, and again in 1863 inquiries were set on foot with similar results.

A colony established.

A colony was then established by Mr. Martin in parganah Bidauli consisting of 1,200 persons, of whom 356 were adult males. This was at first placed under the supervision of Sayyid Mahdi Hasan Khán, an Honorary Magistrate and powerful landholder, resident in the parganah, and about the close of the year 1863, a special police, mainly composed of Bauriya constables with a picked inspector at their head, was posted in the colony for stringent supervision. The first year was an unfortunate one, for the seasons were unfavourable, and in consequence desertions soon took place. Cultivation, too, was unpopular in spite of the inducements offered, *viz.*, in the first year, of holding without rent; in the second year, of paying only two annas per bígha; in the third, four annas; and in the fourth, the maximum of eight annas was reached. It is not to be wondered at that the Bauriya, combining in himself the simplicity of a Bedouin with the dexterity of an English poacher, and from his earliest youth taught by precept and example to live by plunder, should naturally not only become an adept in the art of thieving but also acquire a keen relish for a predatory life. For generations he neither would nor could give up his hereditary calling, and both antecedents and an utter unfittedness for any trade has made the Bhauriya boy, a thief and the Bhauriya girl, a prostitute. The colony soon showed signs of dissolution. Antagonism sprang up between the police and the zamíndár, and, in 1866, the Bauriyas rose *en masse*, and were it not for the good sense and prompt action of the local authorities, the results would have been very serious. In 1870 the numbers had dwindled down

to 704 souls, of whom only 150 were adult males, and in 1875 the numbers again rose to 905. At the close of 1873 the colony was brought under the provisions of Act XXVII. of 1871 (the Criminal Tribes' Act), and the Bauriya constables were replaced by a force which now comprises one sub-inspector, two head-constables, two Bauriya informers, and seven chaukidárs, at a cost of Rs. 258 per month. The great difficulty encountered is how to prevent desertions. During 1874 these were numerous, and were occasioned by the arrest of a leader, Chhatarua, who confessed his crimes and implicated many of the residents, and by one Nandwa recruiting a gang for an expedition. There is no provision in the law authorising the prevention of desertion, and to this is to be attributed, in a great measure, the large number of desertions, which numbered seventy-five in 1874. At the same time ninety-five persons voluntarily returned to the colony, and altogether there is reason to be satisfied with the progress made towards improving the character of the Bauriyas. Mr. Martin's experiment was eminently philanthropic even if utopian in its design, and in respect of the objects aimed at entirely worthy of the attention of Government. The task of supervision is a wearying, thankless one, but this must be thoroughly done and strictly adhered to before any permanent results can be hoped for. As it is, it has been shown that much improvement can be effected by the strict application of the rules already in force.

Tagas.

The principal clans of Tagas in Muzaffarnagar are the Gandrán, Gaur, Pachaulán, Bikwán (said to have come from Bikanír), Nímtán, Bhardwár, Jadwán, Rasdán, and Bháraddhvaj. The Gandrán prevail in Budhána and its vicinity; the Pachaulán in Shikárpur; the Bikwán in Púr Chhapár; the Nímtán and Bhardwár in Charthawal, the Rasdán in Thána Bhawan, and the Bháraddhvaj in Baghra. Most of these names seem merely to be the titles of the *gots*: thus Gandrán is the title of the Vasisht *got*, Pachaulán of the Bachas *got*, and Nímtán is the title of the Gautam *got*. The last *got* are said to have originally held Kasauli on the left bank of the Hindan, and now a Pundír colony, and were in possession of a *bárah* of villages until lately. Gaur Tagas of the Garg *got* once held half Khátauli. The Bikwáns, also, held a *bárah* in Púr Chhapár, and say that they came there with the Gújars, with whom they are still on the most friendly terms. The Tagas give the same story of their origin that they tell in Meerut, how that on the death of Parikshit in a contest with the serpents, his son Janamejáya, returning victorious from Takshasila, caused a great snake sacrifice to be made, in which the Tagas assisted and in reward received grants of land, on account of which they abandoned their Brahmanical occupations and took to agriculture: hence their name Taga (from '*tyág dena*,' 'to abandon'). On this legend Sir H. M. Elliot remarks:— "The extent to which this tradition of the serpent sacrifice (*sarpasatra*) has spread is very surprising. Here we not only have it preserved

by the common people of the north-west, the very scene of the operation, but in inscriptions and legends from distant parts of India. Thus in the 'Asiatic Researches' (Vol. IX.) we have an inscription from a copper-plate found at Bednor, which purports that Janamejáya made a progress to the south and to other quarters, for the purpose of reducing all countries under his dominion, and performed a sacrifice for the destruction of serpents at the confluence of the rivers Tangabhadra and Haridra, at the time of a partial eclipse of the sun. Having completed the sacrifice, the king bestowed gold and lands on certain Brahmans of Gautama Gráma,—a name evidently of Buddhist origin. Though the genuineness of this monument is distrusted by Colebrooke and Colonel Mackenzie: they both concur in thinking it no recent fabrication. If it is forged, it must of course have been drawn up in conformity with notions and traditions generally current on the spot. Again, Stirling ('Report on Orissa,' p. 25) says that the Brahmans of Agrahat, eight miles north of Katak (Cuttack), state that the spot was visited by Janamejáya during his progress over India with all the feudatory princes of the country in his train; and they 'point out the spot where he performed the sacrifice for the destruction of the serpents.' See also 'J. A. S., B.,' September, 1837. It can scarcely be doubted that these serpents, for whose annihilation so much trouble was taken, were Takshak Skythians of the Buddhist persuasion, and the chief supporters of that religion. From the time of the great war, when we find them already in the north-west, to about 500 B. C. they extended their conquests in India; and, as they had a serpent for their national emblem, they were known as the Takshak or serpent race. There can be no question, also, that the early legends of Persia are to be interpreted with this key, and that the voracious snakes of Zahhak were hordes of barbarous Skythians from the north." All through these provinces local tradition relates scenes in the royal progress made by Janamejáya with his victorious army after the defeat of the great snake race.

History.

In the *Mírat-i-Sikandari*, speaking of the Ták race in the Panjáb, the author gives a derivation of the name very similar to that given by the Tagas for theirs. He writes:—"Ták and Khattri were brothers; one of them took to drinking, and the Khattris expelled him from their tribe, and an expelled person is, in the Indian language called '*tyágí*.' From that time the customs, laws and religion of the Khattris differed from those of the Ták." The great tribe of Ták or Takshak, according to Tod, was one of the thirty-six royal races and of Skythic origin. The period of their first great invasion of India occurred about six or seven centuries before Christ, under their leader Sahesnág, and was nearly contemporaneous, according to Tod, with the appearance of the twenty-third Buddha, Parisnáth, whose symbol is that of the race he accompanied, the serpent. His doctrines spread to the remotest parts of India, and the princes of Balabhipura and Anhalwára became followers

of Buddha. Memorials of the bloody wars in which the invaders engaged exist. They invaded Magadha and held its throne for ten generations, and the Raja of Sirgúja still bears the lunettes of the cobra on his shield as the sign of his lineage. The Nágas gave their name to Nágpur in Central India and Nágpur in Garhwál, and it is believed that many of them were converted to Hinduism and that to these converts the term Agnikula (fire race) is properly applied, as signifying their spiritual regeneration.[1] Sir H. M. Elliot thinks that this regeneration must have taken place some three or four centuries subsequent to the great snake sacrifice, the object of which had evidently not been fulfilled, for Astik, the holy man who interposed in behalf of Takshak (brother of the Adityas) and Vásuki (king of the Nágas of Pátála) is said to have been the son of Takshak's sister, so that intermarriages between the Aryans and the Skythians were not unknown, and a powerful remnant was spared. There are frequent allusions to the Nágas in tradition, the Mahábhárata and Puránas. Tod notes that there are numerous ancient inscriptions in Páli "of the race called Tusta, Takshak and Tak, relating to the tribes, the Mori, Pramara, their descendants." Takshak and Nága are synonymous terms for the snake, and Takshak for the great Nágbansi race, of which there are representatives still in existence in these provinces.

The Mahábhárata mentions the Nágas as inhabitants of the Khándava[2] forest and describes their resistance to the Pándavas, who burned the forest to enlarge their new settlement of Indraprastha. Subsequently Arjuna had an intrigue with Ulúpi, the daughter of Vásuki, who resided near Hardwár, and from the entire tenor of the legends concerning the Nágas we must suppose them at this early age to be the descendants of the aboriginal inhabitants, and probably of Turanian origin, and that they were hateful to the Brahmans as being infidels and aliens. The Káyaths ascribe their origin to the union of the great king Chhatargupta with a Nága damsel, and the Agarwála Baniyas are descendants of the marriage of king Ugrasen with the daughter of Vásuki. In the Puránas [3] the great river Narmada is said to be a sister of the Nága, and frequent allusion is made to the intercourse of mortal heroes with the daughters of the serpents (Nága kanya). Tod connects the Takshaks and Nágas with the Paræ-take, the mountain Ták, who were found by Alexander inhabiting the Paropamisan range, and there can be no doubt that Takkasila or Taxila, also visited by Alexander derived its name from the Takkas. Cunningham adduces the curious custom in Taxila mentioned by Q. Curtius and again by Fah-Hian (in A.D. 400) of entertaining guests for three days and then obliging them to depart, to show that the same people occupied the country around Taxila from the time

[1] See Tod's Rajasthan, I. 93; Beames' Elliot, 1, 106; Cunningham Arch. Sur. II. 6; and Fergusson's Snake Worship. [2] The northern half of the present Meerut Division formed a part of the Khándava forest or Khande ban. [3] Hall's Wilson's V. P., III., 282.

of Alexander to that of Fah-Hian, a period of seven hundred years. The country, too, immediately adjoining Udyána, which itself marched with Taxila, is still called Ták-Banu or Banu-Ták. Both Tod and Cunningham connect the name Attak, which was first imposed by Akbar, with the Ták tribe. The old name was Tankúr, or in Arabic Et-tankúr, which suggested the form A ttak, meaning 'obstacle' to Akbar as Parsháwar suggested to him Pesháwar, 'the frontier town' and Bágpat gave him the idea of 'Bághpat.' In A. D. 900 we find the district of Takka-desa forming a part of Gurjjara-desa in the Chaj duáb when Sankaravarmma of Kashmír annexed it to his own dominions, and it is there that the Takkas proper are found to the present day. Further south, Tod makes mention of a Ták chief in Asírgarh in the twelfth century, and two centuries later Sarang Ták, the last great chief of the race, turned Musalmán, and his son became the first Muhammadan governor of Gujrát under the name of Muzaffar Khán. These Takkas played an important part in the history of Kashmír, where they ruled for two centuries. Altogether there is some ground for connecting, with Sir H. M. Elliot, the Tagas with the Takkas, and these latter with an early Turanian race who had the same origin as the Skythians, with whom they were connected. The local legend stating that they came from Gaur (Bengal) is simply incredible. From the evidence before us it is probable that the Tagas are descendants of some alien race which was subsequently obliged to submit to the Aryans and assist them in their onward progress, but all theories on these matters must be purely speculative until we have better materials to build upon.

Other castes.[1]

Gújars and Játs occupy the upland ridge above the Ganges *khádir*, while pargaaah Gordhanpur, within the *khádir* of the Ganges, and parganah Bidauli, bordering on the Jumna, are almost entirely held by Gújars. The Khúbar *got* predominates in Gordhanpur, and a branch of the Jabarhera family is established there. In Bidauli are some Rawas who claim descent from the Khokhars in the far west. Wedged in between the Gújars and the Chauháns of Chausána on the west and the Pundírs of the Muzaffarnagar parganah on the east is a Ját settlement which formed a portion of a *batísa* (group of 32 villages) composed of various *gots* which gradually coalesced. Returning to the Jumna parganahs, we find a Gújar *chaurási* (group of 84 villages) of the Kalsín *got* in parganah Kairána, north-east of which are the Játs of Shámli, while south-east of Shámli comes a *báoni* (group of 52 villages) of Játs of the Ganthwál or Ganthwára *got* grouped around the parent village of Lisárh. These Játs ascribe their origin to Garh Gazni. East of the Ganthwál colony is a *chaurási* of Játs of the Baliyán or Báláen *got*, whose oldest village is Sisauli, near the Hindan. It is bounded on the east by the west Káli nadi, on the right bank of which is situated their chief town, Púr

[1] From a note by Mr. C. Donovan, C.S., through Mr. G. Williams.

Báliyán. Along the northern border of this *chaurási* and south of the tract held by the Tagas and Pundírs lies a mixed population of Játs, Gáras, &c. Báliyán is the title or *baunk* of the Badgújar *got* of Játs, and this must have led Elliot into the error of placing a Badgújar Rajpút *chaurási* here. Chamárs, as usual, form the bulk of the agricultural population, but Játs, Tagas, Gújars and Sainis are the more important portion of the cultivating community. Khági Chauháns are found in the Ganges *khádir*. Like the Gújars and other tribes of still lower degree, the Játs love to style themselves Rajpúts excommunicated on account of their indulgence in *karáo* (concubinage generally, or the marriage of a widow with the brother of her deceased husband). The Rajpúts, while not absolutely rejecting the alleged connection, look upon both Gújars and Játs in the same light as half-castes of inferior origin, but vastly superior to the mass of Gáras, Khági Chauháns and others of the baser sort. Most of the Játs in the districts would come under the head of Deswále, or those who were the first of their clan to obtain a footing in these provinces.

Muhammadans.

Musalmáns are distributed amongst Sayyids (11,999), Shaikhs (167,075), Mughals (1,721), Pathán (9,589), and unspecified (713). The Sayyids nearly all belong to the celebrated Bárha family, of whom some account is given hereafter in the district history. The Shaikhs include the converted Hindús, comprising Gáras, Jojhas, Játs, Gújars, and Rajpúts. The Shaikhs proper, here usually called Shaikhzádahs, are numerous in Púr, Kándhla, and Thána Bhawan. Gáras are so called from the practice of burying their dead which they adopted on their conversion to Islám. They are an industrious race and seem to have been recruited originally from all classes of Hindús, though here they have been chiefly drawn from the Rajpút clans. The name '*jojha*,' signifying 'stomach,' has been given in derision to another class of converts from Hinduism. The name Rangar, generically applicable to all Rajpúts, is sometimes confined to Rajpút converts to Islám, while the Játs and Gújars retain their old Hindu names. The chief landowning Musalmán Rajpút family is that of the Marhal Nawáb of Karnál, who reside in the village of Jarauda in parganah Muzaffarnagar of this district. Originally chief of a petty Rajpút tribe, the Marhal Raja became a convert to Muhammadanism, and during the troublous times of Shah Alam's reign,[1] one of his descendants obtained a grant of parganahs Muzaffarnagar, Charthawal, and Soron, which he held at the conquest. For these the Marhals received in exchange, in 1806, lands beyond the Jumna, but a very great part of their possessions now lies in this district. The Pathán form an influential portion of the Musalmán community in the western parganahs, and there are a few Mughals scattered throughout the district. Sayyids held in the Ganges canal tract, in

[1] The revenue-free grants which were improperly confirmed, notwithstanding Mr. Moberly's sensible attempt to resume them, date from the seventeenth year of Shah Alam's reign.

1874, 124,660 acres out of the 239,287 acres originally possessed by them there.

Occupations.

Statistics relating to the occupation of the people are one of the fruits of the census of 1872. The whole male adult population (exceeding fifteen years of age) was divided into six great classes, of which the fourth included all those pursuing avocations connected with agriculture. The first or professional class comprised all Government servants, soldiers, and persons following the learned professions, literature, the arts and sciences, and numbered 5,803 male adults (not less than fifteen years of age), amongst whom were included 4,273 *purohits* or family priests, 645 pandits, 164 *baids* or physicians, 85 singers, &c. The second class numbered 29,174 members and comprised all males engaged in domestic service, as cooks, washermen, sweepers, water-carriers, and the like. The third class represented commerce and numbered 19,374, amongst whom were all persons who buy or sell, keep or lend money and goods of various kinds, as money-lenders (2,511), shop-keepers (14,329), bankers and all persons engaged in the conveyance of men, animals, or goods, as pack-carriers, ekka-drivers, porters, &c., (605). The fourth class included persons possessing or working the land as proprietors (10,465), cultivators (83,324), ploughmen, gardeners and nut-growers, and every one engaged about animals, as shepherds, graziers, &c., who alone numbered 1,477 male adults. The fifth class, containing 35,405 members, included all persons engaged in industrial occupations, the arts and mechanics, in the manufacture of textile fabrics and dress, or articles of food and drink, as well as dealers in animal, vegetable, and mineral substances. The sixth class contained 52,407 males, including labourers and others (45,592), and persons supported by the community and of no specified occupation (6,789).

Statistics of occupation compared.

Altogether there were 237,456 males classified by occupation in this district, less than one-half of whom were recorded as belonging to the agricultural population. This result is hardly correct, for the greater portion of the labouring population and those entered as pursuing occupations connected with manufactures, mechanics, and the arts derive the greater portion of their subsistence from the cultivation of the soil, and if sixty per cent. of the total male adult population were entered as agriculturists it would be much nearer the truth. In 1848 the total agricultural population numbered 233,749 souls (172,304 Hindús and 61,445 Musulmáns), or 43·4 per cent. of the total population. In 1853 the numbers were 325,189 (241,246 Hindús and 83,943 Musalmáns), or 48·3 per cent. of the total population. In 1865 there were 280,872 agriculturists (205,066 Hindús and 75,806 Musalmáns), or 41·17 per cent. of the total population. The returns of 1872 show an agricultural population numbering 251,971 souls, of whom 184,056 were Hindús (78,755 females) and 67,915 were Musalmáns (30,605 females), and

showing as a whole only 36·5 per cent. of the total population. The percentage of the Hindu agricultural population to the total population was 26·7 per cent., and of the Musalmán agricultural population was 9·8 per cent. Distributing the agricultural population amongst landowners and cultivators there were 11,716 male landholders (6,785 Hindús and 4,931 Musalmáns); 9,316 females of the same class (4,910 Hindús and 4,406 Musalmánis); there were 130,895 male cultivators (98,516 Hindús and 32,379 Musalmáns) and 100,044 females of the same class (73,845 Hindús and 26,199 Musalmánis). Including labourers, the occupation statements show 232,346 male agriculturists, or 62 per cent. of the entire male population, bearing out the statement made above that the agricultural population cannot be less than 60 per cent. of the total population. Throughout the entire provinces the Musalmáns have a less proportion of their number engaged in agricultural occupations than the Hindús. For every 1,000 Hindús the returns show 599 as agriculturists, while for the same number of Musalmáns there are only 351 agriculturists. Mr. Plowden has noticed the abnormally low percentage of the agricultural class in this district, one, too, where there are no large towns and no industrial occupations to employ so large a proportion of the inhabitants. He, too, thinks that the labouring population should be added to the class recorded as agricultural to give correct results.

Mr. Cadell draws attention to the growth of hamlets since the British occupation. In the days of Sayyid supremacy many new villages must have been formed merely to fall away when the fostering power of their founders passed away, and in the latter half of the past century, when Sikh, Rohilla, Gújar and Marhatta, together or in turn ravaged the district no small community could exist, and the settlers fell back on the strong villages from which they had gone forth. Even now there is only 0·5 villages per square mile, while the provincial average is 1·1, ranging from 2·4 in Basti to 0·3 in the wild country of Lalitpur. After the final pacification of the district in 1805, colonies were again sent out, but so gradually that the beginning of not a few flourishing villages is still remembered. "The crowding of the population into large villages," writes Mr. Cadell, "is to a certain extent disadvantageous, but the power which the large cultivating communities have acquired from their numbers and their wealth are of great service to them in resisting the encroachments of the landlords; and the people must feel that they would lose in unity and defensive power if they were scattered over several hamlets instead of being collected together in the old ancestral village. The fact, too, that nearly all the best land is held by occupancy tenants, whose fields are situated all over two and even three estates, makes it still more unlikely that any large number of tenants will leave their present dwellings; for to do so would, while bringing them nearer some fields, take

Change in rural life: the growth of hamlets.

them away further than before from others, and to effect exchanges of hereditary fields is always difficult and generally impossible."

Habitations.

With the exception of some mosques of the Rohilla-Pathán period, two at Ghausgarh and one at Morna, all of which are graceful and picturesque structures; a few Sayyid tombs at Majhera and the once magnificent Sayyid mansions at Jánsath, Miránpur and Kaithora, now fast falling into decay, the architecture of the district presents nothing remarkable. There is not a single Hindu temple worthy of note, and the peasantry occupy the ordinary over-crowded mud huts with thatched roofs common to the whole Gangetic plain. Marble and sandstone of the very best quality, wrought by skilful workmen and adorned with the most exquisite fretwork, entered extensively into the composition of the Sayyid architecture, but the damage to its monuments commenced by Sikhs and Marhattas, and nearly completed by the poverty and indifference of the present Sayyid owners, has left little but a few suggestive memorials of the past. The statistics of the census of 1872 gives the number of enclosures or *ihátahs* inhabited by Hindús at 43,609, whilst Musalmáns occupied 20,400 and Christians 9, or a total of 64,018. This shows 38 enclosures to the square mile and ten persons to each enclosure. The separate houses, their character and distribution, are as follows :—

Class of house.	Inhabited by			Total.	Number of inhabitants.
	Hindús.	Musalmáns.	Christian.		
Built with skilled labour,	13,531	6,831	10	20,372	93,633
With unskilled labour, ...	97,999	36,639	2	134,640	596,449
Total, ...	111,530	43,470	12	155,012	690,082

This return gives 93 houses to the square mile and 4·4 inhabitants to each house. The proportion of persons inhabiting the better class of houses in the total population is only 13·6 per cent., whilst the divisional average is 10·2 per cent., which shows a low standard of comfort throughout the division.

Customs

The panchâyat system is in full force in the district, and the parties to a jury of this kind usually take an oath on a *lota* filled with salt to abide by any decision that may be arrived at. Sometimes when a man is found guilty, a piece of grass is placed between his teeth and he is made to stand thus before the whole assembly. The culprit is always fined, and the fine generally takes the shape of a feast to the assembled brethren who have been needlessly summoned to hear his defence. Chaudhris

are usually elected by a vote of the trade or guild, and perform the same duties as in other districts. There is nothing peculiar in the dress or food of the people deserving of notice. The daily fare of the lower classes amounts to a mere subsistence allowance, and maize, *joár* and barley are ordinarily consumed. The better-off people eat wheat, rice, *dál* and *másh*.

Religion.

As might be expected from its proximity to Dehli, there is a large proportion of converts to Islám in this district, comprising all classes of the community, but chiefly Játs, Gújars, Tagas, and Rajpúts. At present there is no proselytising movement on foot except, perhaps, in the Shámli tahsíl, and, as a rule, there is none of that religious bigotry which is so characteristic of the relations between Musalmáns and Hindús in other districts. The Shiah sect is numerous in the east of the district, where it is represented by the Bárha Sayyids. Besides the general belief in Parameshvar or Bhagwán, the lower classes of Hindús have their favourite saints, to whom and to whose shrines their active devotion is mainly made.[1]

Piyára Jí.

Piyára Jí is one who is a great favourite with a large section of the community. His temple is at Ramdewa, the parent (*thíka*) village of the Dápa Gújars, midway between Nakúr and Ambahta. His grandfather, Rámjí Padárath, Bádfarosh, was born in 1545 *sambat* (1488 A.D.), at Durganpur, in parganah Budhána, in this district, and disappeared immediately after his birth. Six days afterwards, he reappeared, much to his mother's delight, who sacrificed to the gods in thanksgiving. As he grew up, he was appointed to watch the cattle of his father, and one day allowed them to stray into the field of a Rajpút, where they did much damage to the corn. The Rajpút complained, but when the authorities came to make a local inquiry, the field was found intact, and the people declared that a miracle had been performed. The youth had sense enough to make the most of this incident and soon gathered around him a band of disciples. His reputation increased and he married into the wealthy family of Bhawáni Dás, Bádfarosh of Khudi-Shikárpur. The fruit of this union was Raghunáth, who married into a family at Soron and had a son, Piyára Jí. The saintly fame of Piyára Jí reached Garhwál, and the Raja of Srinagar gave him five villages. About this time a quarrel broke out between the Brahmans and Gújars of Sadrpur, and the latter murdered the priests, but in revenge the ghosts of the murdered men tormented the Gújars, who prayed for the assistance of Piyára Jí. He, nothing loth, granted their request and even went further, for he declared that Sadrpur belonged to him in a former birth, and the discovery of a well dug by him proved the correctness of the assertion to every one's satisfaction. Piyára Jí then took possession of the village and changed its name to Andeva, of which Randeva is

[1] See Mr. G. Williams' article in Cal. Rev., LVIII, 193, to which I am indebted for some of these notes.

the modern rendering. He died there and was buried in the village. Prayers and offerings are made at his shrine on the sixth of the dark half of Chait. Piyára Jí was succeeded by his son Lál Jí, who died without issue, and the zamíndárs elected one of his disciples, Har Gobind, to succeed him, and since then the appointment lies in the hands of the descendants of Madári, brother of Piyára Jí, and in the hands of the descendants of the brothers of the widow of Lál Jí. The affairs of the shrine are managed by Bairágis, who own two-thirds of the village, while one-third remains in the possession of Piyára Jí's descendants. The saint's followers are Vaishnavas, and wear black necklaces *(kála kantha)*.

Devi Pulamdeh.

Another Gújar shrine at Biláspur, to the south-east of Lakhnauti, is attended by numerous pilgrims from this and the neighbouring districts in the month of Asárh. Mr. Williams gives the following account of its origin :—"About three hundred years ago, Amrao, Gújar, a zamíndár of Biláspur, suddenly took to shaking his head about and exclaiming :—'I am Devi Pulamdeh. Erect a temple to me. Rati, Brahman, will be my priest ; he and his descendants are to receive all offerings made to me.' The inspired voice was obeyed without question. About half a century ago, Sáhib Mall, a pious Mahájan of Bidauli, built a well near the temple for the convenience of worshippers."

Goga Pír.

Goga Pír is worshipped throughout the upper Duáb by both Hin lús and Musalmáns. Large assemblies are held in his honour at the Goga-kathal fair in Guru Rám Rái's Thákurdwára in Dehra, at the Gúgúhal fair at Mánikmau near Sahárunpur, and at the Súraj Kund in Meerut and Niloha in the Meerut district. These assemblies are called *chhariyán*, from the standards borne by the pilgrims. On the ninth day of the new moon of Bhádon the standards are raised and are carried about whilst the fair lasts, which is usually two days. The tomb of the saint is twenty miles beyond Dadrera and 200 miles to the south-west of Hissár.[1] He is also called Záhir Pír, and in Meerut Záhir Diwán. The local tradition is that Goga was the son of a Chauhán Rajpút Raja called Vacha, or as some say Jewar, whose wife, Báchal, a Tuárin, after she had been long barren, bore to him a son through the kind intercession of Gorakhnáth. His territory extended from Hansi to the Ghara or Satlaj, and his capital was at Mehra on that river. Another legend makes him Raja of Bikanír. In a quarrel about land he killed his two brothers, and, grieved at their fate, prayed that the earth might open and swallow him, but a voice from heaven declared that he would not be buried alive, horse and all, unless he repeated the Musalmán confession of faith. He appears to have done so, on which the earth opened and he leaped into the chasm. Another legend makes his opponents not only his brothers but his relative Prithiráj of Dehli. He conquered all these with

[1] See Beames' Elliot, I, 255.

the aid of Ratan Háji, who gave Goga a javelin which shot hither and thither through the air of itself and destroyed all obstacles. Prithiráj was killed in the fray, and in remorse for his crime Goga buried himself alive. Goga's horse is celebrated under the name Javádia. It is said that the father of Goga received two grains of barley *(jau, java)* from his guardian deity, one of which he gave to his wife, who bore him Goga, and another to his mare, who brought forth the steed Javádia[1] Some say the barley-corns were given by Goga to his own wife and stud-horse. Sir H. M. Elliot thinks that there is some reason to suppose that Goga "must have contended with the earlier Ghaznavide monarchs, for several favourite ballads relate how he fell with his forty-five sons and sixty nephews opposing the great Mahmúd on the banks of the Ghara." The Agarwála Baniyas are specially devoted to Goga, and on his feast day the Bhangís (or sweepers) carry round the sacred symbols of the Pír and levy contributions. Cunningham says[2] that in the lower Himálayas of the Panjáb there are many shrines to Goga. There the legend runs that Goga was chief of Ghazni, and fought with his brothers Arjun and Surjan. "He was slain by them, but a rock opened, and Goga again sprang forth, armed and mounted. Another account makes him lord of Dard-Darehra in the wastes of Rajwára." Tod[3] writes:—"Goga, Chauhán, was the son of Vacha Raja, a name of some celebrity. He held the whole of Jangal-des, or the forest lands from the Satlaj to Hariána; his capital, called Mehera or Goga-ka-Mairi, was on the Satlaj. In defending this he fell with forty-five sons and sixty nephews; and as it occurred on Sunday, the ninth of the month, that day is held sacred to the *manes* of Goga by the thirty-six classes throughout Rajputána, but specially in the desert, a portion of which is yet called Gogadeo-ka-thal. Even his steed Javádia has been immortalized and has become a favourite name for a war-house throughout Rajputána, whose mighty men swear by the *sáka* of Goga, who maintained the Rajpút fame when Mahmúd crossed the Satlaj."

Bába Kálu.

Bába Kálu is another of the local saints held in great reverence by low-caste men as Chamárs, Kahárs, Kumhárs, Sainis, Gararíyas, and Mehras. Játs are also said to do him honour. The origin of the worship of this saint is thus described by Mr. Williams:—"The fairies were wafting Solomon through the air upon his throne. The monarch, looking down, chanced to see a young Kahár girl heaping up manure on a dung-hill. The sight disgusted him so much that he affected to stop his nose and exclaimed, 'Who in the world could marry such a dirty ugly little girl!' Soon after, however, desiring to take a bath, he had his throne laid down by the edge of a stream. He undressed and inadvertently

[1] Tod's Rajasthan, II, 413, note. [2] History of the Sikhs, 11; Herklotts, 432. [3] Rajasthan, II., 471.

left his magic ring near his clothes on the bank. Scarcely had he plunged in than a fish, jumping out of the water, swallowed the talisman. The fairies at once flew away with the throne, for the charm of the ring was broken. The king remained shivering behind in great distress. He eventually made a virtue of necessity and took refuge in an adjacent village, where he was hospitably received in the house of the very girl he had seen gathering dung. One day the maiden's mother remarked to her husband—'You should marry our daughter to a man like our guest.' This she repeated thrice. The mystical number worked, and Solomon said, 'Marry her to me, for you have spoken three times.' The marriage was accordingly celebrated, and consummated, the young couple living in a separate abode. Some time after the king's father-in-law went to drag the river with a net, and catching, among others, the fish that had swallowed the magic ring, carried home his prize. The fish being a large one, his wife told him to give it to his daughter and keep the rest. When the girl cut it open, she discovered the ring, and gave the ornament to her husband, saying, 'It is a beautiful thing and worthy of you.' When the evening meal was over, the king put the talisman on his finger: the fairies appeared bringing in the throne, he seated himself upon it, and vanished, never to return. His disconsolate wife was pregnant, and in due course brought forth a child,—Bába Kálu. A stick decorated with peacock's feathers represents the holy personage. To this fetish, trifling offerings are made; many other such superstitions, not to speak of ghost and demon-worship, prevail. They prove Hinduism proper to be a mere name. Brahmanism is something quite above the comprehension of the masses, whose degraded religious condition presents only one hopeful aspect. The greatest obstacle to the propagation of a true faith is a creed which, though false, still seems to meet wants satisfied by one more pure. But the paganism I have just described barely rises above the level of fetishism: it is thus hard to understand why the mind of the nominal Hindu should be invincibly prejudiced against the reception of a higher form of religion, and, as a matter of fact, Muhammadanism has been extensively accepted."

Language.

The chief peculiarity of the dialect of the people is the strange mixture of garbled Persian and Arabic with pure Hindi words. A man accustomed to the eastern districts finds that he must substitute pure Hindi for ordinarily used words like *zamín*, while he is met here by mispronounced words of Persian and Arabic origin which sound at first hopelessly unintelligible. A cultivator thinks it grand to speak of his '*maldah*' instead of his '*má*.' A Chamar watching a corn-field will say that he is doing '*mahanjat;*' a villager speaking of the death of his neighbour will say that he has '*kál kar diya*,' and it takes some time and thought to trace such mangled expressions to their true source and to identify them with such refined terms as '*walidah*,' '*muháfizat*,' and '*intikál*.' Beyond this there is nothing

peculiar in the language. Ordinarily spoken Hindi is more generally used by the people of the *khádir*, and Urdu by the inhabitants of the upland.

Education.

In 1848 there were 290 schools in this district, of which 108 were Hindi, 23 were Sanskrit, 110 Persian, 48 Arabic, and 1 English. In Kairána alone there were 1 Hindi, 2 Sanskrit, 8 Persian, and 6 Arabic schools, with 246 pupils. In Muzaffarnagar there were 14 schools, and the average in each of sixteen other towns was 5·5. Amongst the villages, one had nine schools, one had six, three had five each, six had three each, seventeen had two each, and eighty-nine had one school each. There were 290 teachers, of whom 170 were Musalmáns. The average age of each teacher was 38·25 years, and his average monthly income was Rs. 4-2-2. The total number of boys at school was 3,411. Fixed salaries were paid to 252 of the teachers, and 38 of them taught gratuitously. In the parganahs inhabited by Gújars, Chauháns and Chamárs there were very few schools. Of the Hindi schools, eleven taught Sanskrit also, and in 97 arithmetic and keeping of accounts were taught. Of the teachers, 14 were Musalmáns, 48 were Brahmans, 43 were Jogis, and 3 were of other classes. Their average monthly income was Rs. 3, 2, exclusive of daily food. There were altogether 1,650 boys attending these schools, out of which number 936 were Baniyas, 315 Brahmans, 47 Musalmáns, 40 Rajpúts, 1 Káyath, and 311 miscellaneous. The 23 Sanskrit schools were attended by 229 pupils, and all the teachers were Brahmans.

Amongst the Persian and Arabic schools 80 were in villages and 78 in towns. Two teachers were Hindús and 156 were Musalmáns; 139 received fixed pay at an average of Rs. 5 a month, besides what they received on holidays, on the marriage of their students, or when they commenced new books. There were 1,516 students, of whom 1,152 learned Persian and 364 studied Arabic; 535 were Hindús and 981 were Musalmáns. The solitary English school was one kept up by the Government officers at head-quarters, which was attended by 16 pupils. Taking the district as a whole, in the 289 vernacular schools in 1848 there were 3,395 pupils under instruction (1,028 Musalmáns and 2,367 Hindús) out of 44,799 male children fit for instruction, or 6·9 per cent. The average area to each school was 5·6 square miles. 135 villages had schools and 993 villages had no schools. Only 18 of the Persian schools and 23 of the Hindi schools had been in existence for more than ten years. Education is now under the superintendence of the Inspector of the first or Meerut circle in concert with the local educational committee, of which the collector of the district is *ex-officio* president. The tahsíli schools were opened in 1856, the halkahbandi or village-circuit schools in 1859, the female schools in 1864, and the zila school in 1867. The zila school educates up to the third class of a high school, or two years short of the matriculation standard. It has a

boarding-house for the accommodation of pupils from the district. Though there are no Government female schools, there are seventeen girls' schools included amongst the indigenous unaided schools.

The following statement gives the educational statistics from the departmental reports for 1860-61, 1870-71, and 1874-75 :—

Class of school.	1860-61.			1871-72.							1874-75.						
	No. of schools.	No. of pupils.	Cost.	No. of schools.	No. of pupils. Hindús.	No. of pupils. Musalmáns.	Average daily attendance.	Cost per head.	Proportion borne by State.	Total charges.	No. of schools.	No. of pupils. Hindús.	No. of pupils. Musalmáns.	Average daily attendance.	Cost per head.	Proportion borne by State.	Total charges.
			Rs.					Rs. a.	Rs. a.	Rs.					Rs. a.	Rs.	Rs.
Government. Zila (inferior),	...	...	...	1	52	13	66	50 0	34 9	3,737	1	58	12	60	55 15	55 15	3,358
Tahsíli and parganah.	5	272	1,309	4	188	60	217	4 15	4 4	1,199	8	382	107	350	7 3	6 5	2,543
Halkabandi,	88	1,960	7,060	91	1,899	999	2,768	3 3	1 9	10,187	107	2,046	933	2,240	5 14	...	13,340
Female,	...	...	...	2	...	30	25	4 5	4 5	130	5	..	74	58	9 0	7 0	446
Municipal,	...	...	...	...	...	...	..	..	...	...	4	56	54	80	5 12	..	465
Indigenous (unaided).	239	2,927	9,778	222	2,093	1,173	2,589	2 5	...	7,574	318	2,219	1,460	3,121	3 6	...	11,336
Total, ..	352	5,159	18,147	320	4,232	2,275	5,665	...	...	22,821	443	4,761	2,640	5,903	...	...	31,488

Statistics of education at the census.

An attempt was made at the census of 1872 to collect some information on the state of education generally amongst the people. Though avowedly defective in detail, the general indication of the result may be accepted. The following statement shows the number of Hindús and Musalmáns who can read and write (literate), and the percentages of the same to the total population of the same religion, sex, and age. The Christian population is so small that the returns affecting them have been omitted :—

Ages.	Hindús. Males. Number.	Literate.	Percentage.	Females. Number.	Literate.	Musalmáns. Males. Number.	Literate.	Percentage.	Females. Number.
1 to 12 years, ...	91,358	1,534	1·6	71,251	...	33,392	367	1·6	28,140
12 to 20 „ ...	46,566	2 832	6·0	35,648	...	16,881	701	4·1	14,264
Above 20 „ ...	136,125	9,311	6·8	118,002	1	51,263	2,035	3·9	47,157
Total, ...	274,049	13,677	...	224,901	1	101,536	3,103	...	89,561

Police.

The chaukidárs or village watchmen are organised under Act XVI. of 1873, and in 1874 numbered 1,239, distributed over 937 inhabited villages and giving one to every 467 of the rural population. The sanctioned cost per annum is Rs. 45,180, which is met by a grant from provincial funds. The regular police enrolled under Act V. of 1861 numbered, during the same year, 723 men of all grades entertained at a cost of Rs. 80,989 per annum, of which Rs. 60,775 are paid from the provincial revenues and the remainder from other sources. The average pay of each constable is Rs. 72 per annum. The proportion of police to area is one to every 2·23 square miles, and to population is one to every 954 inhabitants. The following statement gives the crime calendar for eight years and the results of the action of the police in the detection and prosecution of offenders :—

Cases cognizable by the police.						*Value of property.*		*Cases.*			*Persons.*			
Year.	Murder.	Dacoity.	Robbery.	Burglary.	Theft.	Stolen.	Recovered.	Total cognizable.	Under inquiry.	Prosecuted to conviction.	Brought to trial.	Convicted and committed.	Acquitted.	Proportion of convictions to persons tried.
						Rs.	Rs.							
1865, ...	4	1	2	266	505	45,012	9,290	1,036	407	187	673	268	387	39·8
1867, ...	2	...	9	182	631	46,073	9,594	1,120	379	186	764	348	377	45·5
1868, ...	8	1	16	261	709	38,266	11,241	1,344	799	243	898	487	348	54·2
1870, ...	3	...	9	234	327	23,018	7,542	928	582	270	723	471	252	65·1
1871, ...	7	2	21	291	408	28,899	6,404	1,075	718	243	624	379	245	60·7
1872, ...	9	...	7	432	337	31,166	7,997	1,085	1,044	296	776	484	256	62·3
1873, ...	6	1	21	472	350	25,277	9,288	1,130	1,130	375	849	619	189	72 9
1874, ...	7	1	10	378	339	16,151	7,661	1,238	1,238	473	1,192	903	194	75·7

For several years the police administration in this district was characterised as the worst or amongst the worst in these provinces. In 1871 the Inspector-General writes :—"The police have been slothful in inquiries and unsuccessful to a degree in prosecutions," and the figures given above would certainly bear out this verdict. Since then, however, the district administration has been gradually and steadily improving. Sansiyas from Bundelkhand, Bauriyas from the district itself, and Kanjars, Nats and other gipsy tribes form the prevailing element amongst the criminal population. Two of the six murders committed in 1873 were the killing of young children in order to use their life blood in the preparation of certain charms to prevent barreness in the one case and to propitiate the demon ruling the black art in the other case. In the adjoining district of Saháranpur a similar crime was committed with the same object in 1873. There are police-stations of the first-class at Kairána, Shámli, Thána Bhawan, Budhána, Khátauli, Míránpur, Muzaffarnagar, Bidauli and

Gordhanpur; there are second-class stations at Jhanjhána, Jánsath, Púr, Bhupa, Chausána, Titáwi, Sháhpur, Kándhla, and Charthawal; and third-class stations at Dharmpura, Butrára, Barla, Ilahabás, and Begharazpur. The Bauriyas of Muzaffarnagar have been settled in Bidauli and have been placed under the provisions of Act XXVII. of 1871 since August, 1873. They then numbered 832 souls, and in 1875 there were 905. Some account of them and their colony, comprising some seven villages, has been given on a previous page.

Infanticide.

Under the provisions of Act VIII. of 1870 inquiries were instituted regard-ing the practice of female infanticide by the Rajpút tribes in this district. In July, 1870, the Magistrate reported that 230 villages were suspected and 36 were particularly addicted to the practice, but the report was so incorrectly drawn up that it was impossible to act upon it, and the matter was allowed to lie over until the statistics of the general census of 1872 were available for comparison. A fresh report was made in March, 1873, with detailed lists of all the villages proposed for proclamation. First those parganahs were selected in which the tribal percentage of female minors fell below 40 per cent. on the total minor population. Then those villages were taken which had a reasonably large minor population and the percentage fell below 35. Only when the figures showed very flagrant guilt were any villages included from parganahs which were innocent as a whole. The entire number of villages coming under repression according to these standards was 130, inhabited by Rajpúts, Játs, Tagas, and Gújars. Amongst the Rajpúts four clans were found guilty: the Kachhwáhas, Jhotiyánas, Pundírs, and Chauháns. The Kachhwáhas live in nine villages and were proclaimed in two. Seven villages inhabited by Jhotiyánas, ten Pundír villages, and two Chauhán villages came within the rules. The Tagas in 18 villages, Játs in 48, and Gújars in 43 were also proclaimed and brought under the rules from the 1st April, 1873. A further revision took place towards the end of 1873, which resulted in the exemption of 36 villages, leaving 94 villages on the proclaimed register in May, 1874.

Jails.

There is but one jail in the district, the statistics of which are as follows. The average number of prisoners in jail in 1850 was 237, in 1860 was 83, and in 1870 was 94. The ratio per cent. of this average number of the population, as shown in the census of 1865 (682,212), was in 1850, ·034; in 1860, ·012; 1870, ·013. The number of prisoners admitted in 1860 was 770, and in 1870 was 473, of whom 10 were females. The number of persons discharged in 1870 was 374. In 1870 there were 57 admissions into hospital, giving a ratio of admissions to average strength of 60·75; of these 8 died, or 8·46 of the total strength. The cost per prisoner per annum in 1870 was—for rations, Rs. 18-5-2; fixed establishment, Rs. 18-15-0; contingent guards, Rs. 10-4-7; police guard, Rs. 6-2-6; and additions and

repairs, Rs. 6-13-4, or a total of Rs. 60-8-7. The total manufactures during the same year amounted to Rs. 1,285-2-0, and the average earning of each prisoner to Rs. 13-9-7. In 1870 the Muhammadan prisoners numbered 132, and the Hindu 260. There were 6 under 16 years of age, 367 between 16 and 40, 88 between 40 and 60, and 11 above 60. The occupation of the majority of the male prisoners were agriculturists, 160; labourers, 81; shop-keepers, 25; and professional, 79.

Fiscal history.

The general fiscal history of Muzaffarnagar has been noticed under the Saháranpur district, and but a few local notes are necessary here to fill up the outlines of the various settlements of the land-revenue, already given and to afford a sufficiently clear view of the state of the district itself. The first order regarding the conquered provinces is contained in a letter from the head-quarters camp at Khúrja,[1] four days after the capture of Aligarh, directing the Collector of Moradabad to enlist five hundred matchlockmen for the defence of the upper duáb. On the 2nd October, 1803, the Collector of Moradabad was directed to attach such portions of the territory conquered from Daulat Ráo Sindhia, as lay near the Moradabad frontier, to his own district, and make a settlement for one year on as fair and moderate terms as could be attained to with the information before him. It was left to his discretion to make the settlement immediately with the actual proprietors, or with amils of respectability, or to collect the land-revenue direct through tahsíldárs, and his instructions [2] concluded with an assurance on the part of Government that "whilst your utmost endeavour will be exerted to fix a fair and equitable rate of assessment on the conquered districts, committed to your charge, you will not be unmindful of the serious obligation which is imposed on you of regulating your conduct in such a manner as to conciliate the confidence and attachment of the inhabitants of those districts, and to impress them with a just idea of the inestimable benefits which will result to them from being placed under the protection of the British Government." The Collectors of Moradabad and Etáwa and the Agent of the Governor-General at Farukhabad met at Koil on the 28th October, 1803, and arranged that the tract now comprised in the districts of Saháranpur, Muzaffarnagar, and part of Meerut should be managed by the Collector of Moradabad as the first division, while the south of Meerut and the greater portion of Bulandshahr were placed under Colonel Ochterlony, the Resident at Dehli, as the second division. This allocation of the conquered territory was confirmed in November, 1803, as a temporary measure, and until the revenues of the province were sufficiently ascertained to admit of a further distribution. Even then it was thought that

Settlement of 1803-04.

[1] From J. Gerard, Adjutant-General, to W. Leycester, Collector, Moradabad, 8th September 1803. [2] Given in more detail in Gazetteer, II., 207.

the "extreme distance of the north-western portion of the duáb from Moradabad, and the necessity of retaining some efficient civil authority near the extensive frontier on that side towards the countries of the Sikh chiefs, would render a subdivision of this portion necessary." In December, 1803, a new arrangement was made by which the tract comprising the first and second divisions of the Koil conference was to be formed into a separate charge under Mr. J. D. Guthrie, but, owing to the disturbed state of the district, the transfer did not take place until the 30th August, 1804. It would, therefore, appear that Mr. W. Leycester of Moradabad made the first settlement for a portion of the new division, and Colonel Ochterlony made the settlement for the remainder.[1]

1804-05.

One of the first duties of the Collector was to inquire into the tenure of parganahs Muzaffarnagar, Charthawal, and Soron, *held* in *jáedád* for the support of troops by the Marhal chiefs, Muhamdi Khán, Mansúr Khán, and Ghairat Ali Khán, and parganahs Banat and Baghra, held on a similar tenure by Najábat Ali Khán. Instructions were also issued for the new settlement which was to be made through amins, and to follow the spirit of the rules laid down for the ceded provinces as noted under the Saháranpur district. Where revenue was taken in kind there were to be three classes of land:—*banjar*, or waste; *chanchal*, or land which was for three to four years out of cultivation; and *polach*, or land in a full state of improvement. For the first class the Government demand was fixed at one share out of eight, for the second at two shares, and for the third at five shares. The cultivators were to be bound down that the cultivation of *polach* land should not be less in the ensuing than in the current year. Of the expenses usually attending settlements, *bhent* or *nazarána*, measurement charges and patwáris' dues, the first was to be abolished, the second was to be borne by Government, and the third by the cultivators, while it was ordered generally that a liberal allowance, according to local custom, should be made to the headmen of villages wherever division of crops prevailed. Mr. Guthrie was much troubled by the Sikhs and Pindáris, and, for a time, took up his quarters at Fazlgarh (eight *kos* from Meerut). In forwarding his fiscal arrangements for 1212 *fasli*, he notes an increase of Rs. 79,983 above the assessment of 1811, but adds that "from this increase, however, there will be large deductions on account of the damage sustained from the incursions of the enemy and the march of the troops through this district." Up to the end of May, 1805, the Collector performed the duties of Magistrate and Collector for both divisions. Towards the end of May, he handed over the office of Magistrate of the southern division to the newly appointed Judge and Magistrate of that district, resident at Meerut, but

[1] The statement at p. 207 of the Gazetteer, Vol. II., must be corrected accordingly, as though the orders were given in December, 1803, for Mr. Guthrie to take charge, they were not carried out until August, 1804, according to the local records.

the separation of the duties of Magistrate and Collector for the northern division of the district, the head-quarters of which were at Saháranpur, did not take place until the 27th October, 1805.

In handing over charge to the Meerut Magistrate, Mr. Guthrie writes as follows[1]:—"At the time of the settlement the tahsíldárs were made responsible for the police on the terms of the regulations for the ceded provinces, the settlement being made individually with the zamíndárs, and on the same principles of the regulations, police daroghas were appointed in the principal towns of their parganahs. The two farmers, Raja Ramdayál Singh and Raja Nain Singh, and the *mukararidárs* were equally made responsible for the police in their several parganahs. I did not think it expedient to appoint police officers to the principal towns in those parganahs, as I knew it would occasion dissatisfaction to them, and I did not consider it absolutely necessary. You will observe, however, that police officers were appointed to the several ghâts on the Ganges—a measure which I conceived to be highly essential. A Mufti, Maulvi Muhammad Zahid, was appointed to superintend the trials of prisoners committed. I beg to mention to you the conduct of Fateh Ali Khán, a gentleman of rank and family at Meerut. During the short time Holkar was at Meerut he took charge with his private followers of one of the gateways, and the kánúngos of the parganah did the same at another gateway. The circumstance was reported to His Excellency the Commander-in-Chief: their conduct was certainly highly meritorious. As the parganahs of Muzaffarnagar, Charthâwal, and Soron will probably form a part of your division, and under a doubt whether the parganahs of Baghra and Banat (Shámli) may not also be included in it, I beg to state the circumstances of those parganahs. The three former are held as *jáedád* by Muhamdi Khán, Mansúr Khán, and Ghairat Ali Khán, for which they are bound to keep up 200 horse. These horsemen are of course under the control of the ruling power, and as such, I employed them at the Hardwár fair in 1804, and at one time had a party stationed at Meerut. These parganahs were never directly confirmed to them. The two other parganahs, with several others that were last year under Mr. Guthrie, are held as *jáedád* by Nijábat Ali Khán; he has regularly been in attendance on the Commander-in-Chief, and the parganahs were confirmed to him by His Excellency. I had never occasion to exercise authority in those parganahs, and though there could be little question of the right, I should have some doubt as to the mode of exercising authority there; without reference and orders, I should not have done it excepting through the above persons holding the parganah in *jáedád*. It may be proper you should be informed that some suspicions attached about January, 1804, in the mind of His Excellency the

Mr. Guthrie.

The Muzaffarnagar jáedáds.

[1] Board's Rec., May 24th, 1805.

Commander-in-Chief relative to the conduct of Raja Ramdayál Singh and Raja Nain Singh; they were supposed to hold hostile correspondence with Holkar. This originated in the information of a man of the name of Zámin Ali, who had been the vakíl of Ramdayál, to Monsieur Perron some time before, but between whom there latterly has existed great enmity, for the gratification of which we know the natives will often go very great lengths. By every various mode I adopted I could discover nothing that led to any suspicion in my mind. Some letters to Holkar, intercepted or said to be intercepted, were delivered by Zámin Ali; but though I addressed Colonel Blair at Agra, where Zámin Ali then was, I was unable to obtain any account of so important a point, as how they were intercepted. Ramdayál behaved very well, at the first opening of the war, in delivering up original sanads from Monsieur Perron for a part of the Moradabad district. He particularly, and Nain Singh also in some degree, are of most uncivilized habits and manners, and their minds are little calculated to comprehend the arrangements of general justice on which our system of government is founded. I endeavoured in every possible manner to impress upon them the conviction that their future prosperity depended entirely on their duly conforming themselves to the orders and rules of our Government. They were in the habit of considering themselves as tributary princes, rather than subjects, an idea they cannot easily abandon, but which presents many disadvantages as such. Ramdayál was allowed a mint under the Marhatta government, and I had some difficulty in prevailing on him to relinquish it. I have no reason to believe that these Rajas have deviated from their allegiance in the present year, and I should suppose all doubts of their fidelity to have been greatly dissipated from the mind of the Commander-in-Chief, as their tenures were confirmed to them by His Excellency when the army was at Meerut in pursuit of Holkar."

The Gújar grantees.

"Rái Rámdhan Singh, of Púth Sayána is a character of nearly the same stamp; his son, however, who manages the business, is not deficient in education. Zulfakár Ali Khán of Jánsath is a highly respectable Sayyid.[1] At the period of the power of the Sayyids at the court of Dehli, the vicinity of Jánsath was the chosen seat where numbers established themselves. It, at present, exhibits an immense scene of ruins, and the population principally consists of the impoverished descendants of fallen families of former rank and splendour. In the course of time their *jáyírs* and lands have been attached; there are still, however, some few Sayyids who have tolerable means to support themselves with decency. You will be surprized to find one who is still

Játs of Kuchchesar.

Sayyids of Jánsath.

[1] Zulfakár Ali Khán died in 1824, and the taluka then contained 27¼ villages assessed at Rs. 6,000. He was succeeded by his son Akbar Ali Khán, and the assessment was then raised to Rs. 15,001.

proprietor of a *jágír* in the vicinity of Bombay. This place is famed for producing horsemen of spirit and vigour, and the very lowest of them take a high pride in their acknowledged hereditary bravery. Bisharat Ali, one of the risáldárs at Meerut, with the greater part of the horsemen are from that quarter. Of the lower orders in the parganahs you will find a large proportion of them addicted to most daring robberies and thefts, which they execute in the most adroit manner. You will find them, however, industrious in cultivation, pursuing a system of irrigation unequalled in any part of the country I have been in, and in parts a very flourishing and fertile country. Among the disadvantages are to be reckoned the numerous petty forts that exist: there is hardly a village but what is fortified, and you will often see five or six in view at the same time. My idea of these petty forts has always been that every opportunity of misconduct should be taken to destroy them, but that they should be considered inviolable during good behaviour." This letter does not give a very pleasing account of the district. Harrassed by the Sikhs, every village community was obliged to construct for themselves places of refuge into which they might retire on the appearance of "the white horsemen," and hence the number of petty forts which the Collector complains of. But he does so with justice, for no sooner were the landholders relieved from Sikh invasions than they turned their forts into asylums for professional highwaymen with whom they shared the spoil, and notwithstanding the halo that encircles the Rajpút name, it must be confessed that many a family amongst them has risen to wealth and influence as *thangdárs* (or receivers of stolen property) and harbourers of thieves. In the early part of the present century the Ját Rajas of Mursán and Háthras, the Parihár of Sandaus, the Chauhán of Chakrnagar, the Bhadauriya of Kamait, and the Jádon of Awa Mísa were notorious for the countenance shown by them to thags and dakaits.

1804-05.

The year 1212 *fasli* (1804-05 A.D.) was marked by the inroads of the Sikhs. The loss of revenue caused by the destruction of crops in the Saháranpur district as it then stood, and exclusive of the parganahs under the Resident at Dehli, was estimated at Rs. 86,905, without counting the cultivators' share of the profits and the plunder of cattle. The Collector wrote[1]:—"The loss in cattle sustained by the zamíndárs in those parganahs near the Jumna is ruinous in its present effects and future consequences. From the best information that I can procure, the number of cattle driven away from the district by the Sikhs amounts to 30,000." In a subsequent letter,[2] referring to the state of the district during 1212 *fasli* and the sanction to the proposed remission of Rs. 86,905, the Collector wrote:—"This act of justice exonerated the málguzárs from demands on account of the crops destroyed by the enemy, and was a most

Depressed condition of the district.

[1] Board's Rec., July 2nd, 1805, No. 2. [2] *Ibid*, May 6, 1806, No. 12.

seasonable mitigation to their distresses, but the relief afforded was not equivalent to the injury sustained, as they forfeited that share of the produce which had it been gathered in they would have enjoyed. Although the expectations of the cultivator from the harvest were thus frustrated and his labours unrequited, this misfortune might be relieved by industry, and perhaps under the advantage of a succeeding favourable season; but many were cut off even from this hope by the loss of their cattle, of which not less than 30,000 were plundered and carried away by the Sikhs. In consequence of these misfortunes, in which almost every zamíndár to a certain degree participated, as well as in the loss of villages plundered or burned, and from contributions in money and grain extorted by the Sikhs, many zamíndárs were left destitute of stock to enable them to cultivate, and the landholders generally manifested reluctance to enter into new engagements, especially as the Marhatta army was then on the march avowedly with the intention of again invading the Duáb. They were, however, soon relieved from this apprehension, and the state of affairs such as I have described it to have been at the time the settlement was undertaken underwent a happy change before any considerable progress had been made towards its conclusion." Though the fear of invasion was removed, the effects of twenty years of exposure to spoliation from raiders were long observable, and quite as many years elapsed before traces of the misrule that prevailed before the conquest can be said to have been eradicated. Some account of the Sikh invasions is given hereafter in the historical portion of this notice, and from it will be seen that in number and in the injury caused by them, they equal those from which any district in these Provinces has suffered and which have been recorded. From the Siwálik hills to Meerut few tracts, with the exception of those inhabited by their Gújar allies, escaped the raids of the Sikh horse, and to such a degree did their influence prevail, that in order to protect themselves, the people allowed their country to be divided into *pattís* or sub-divisions, each of which paid black-mail to certain Sikh sirdárs. The industrious communities were reduced to the lowest pitch of misery, and the chief portion of the produce of their fields went to feed the numerous soldiery who swarmed in every direction.

Origin of the great farms.

At this time much of the district was held by large farmers who paid a fixed revenue, and hence were called *mukarariddrs*. The principal were the Gujár Rajas Ramdayál and Nain Singh, Ráo Rámdhan Singh of Kuchchesar, Ráo Ajít Singh of Dádri, Sayyid Zulfakár Ali Khán of Jánsath, and Bahrmand Khán, the Turkmán of Lakhnauti. The Collector explains the fact of by far the greater portion of the district being in the hands of farmers as due to the oppressions exercised by the Marhatta government, and particularly to their revenue system. "To avoid the extortions exercised by the amils, who paid little respect to the rights of the inferior

class of zamíndárs, they sought protection under others of greater wealth and influence, who undertook the management of their lands; while bankers, also, men entirely ignorant as to matters of agriculture, speculated in farms which they obtained by having interest with the amils; and this practice seems to have been countenanced by the Government, for which the reason assigned is that the farmers paid their revenue by anticipation, and bore the risk of all balances due to themselves by their under-renters. The result of this impolitic system, adopted to supply the immediate exigency of the Government, has been that a few individuals have grown into importance, while agriculture has been gradually on the decline, and a great part of the labouring class of zamíndárs are so much depressed as to be destitute of means to undertake the cultivation of their own lands. Such is the depressed state of the zamíndárs in general that many from want of means to perform the business of cultivation, and others from want of confidence, forego the probable advantages to be derived from managing their own lands for the certainty of sharing a stipulated part of the produce; and I have to regret that the inducements I could offer consistently with my duty have so seldom prevailed over the objections of the zamíndárs that where an actual proprietor relinquished his claim to be considered as a principal in the settlement, his lands were let in farm." However this may be true of the greater number of the farmers mentioned, it would appear that the Sayyids of the Bárha became over-lords and real proprietors in the eastern portions of the district long before the Marhattas occupied Muzaffarnagar, and the change in proprietorship was due to the grant of *jáedáds* and to the election of one man out of many as *mukararidár*, a single individual being more convenient for military purposes than a community, and more likely to furnish his quota of men and money. With all the horrors that overwhelmed the upper Duáb during the last century, famine, anarchy, the marching about of contending armies both Rohilla, Sikh, Marhatta and British, it is hardly necessary to attribute the depressed condition of the agricultural body to the bad system of the Marhattas alone. Neither individual cultivators nor communities could accurately gauge the amount of success which gave a claimant the rights of a *de facto* ruler, and they were only too glad to acknowledge any one who had power enough to protect them: hence the great influence of men like the *mukararidárs* and the growth of their nominal possessions.

Settlement of 1805-06.

The first triennial settlement for 1213-15 *fasli* was prefaced by the issue of instructions to the tahsíldárs to draw up a *daul* or estimate of the produce and its value, which was made in presence of the landholders and forwarded to the Collector, but as this account was made before the *rabi* crops had been sown, it was necessarily imperfect. It was useful, however, for the rain crops, *kangni*, maize and *bájra*, which, according to local usage, were divided into three classes, and revenue was levied on

these classes alone, and not according to the market value of each particular grain. The Collector went on tour in November, 1805, and thus describes his mode of assessment:—"On my arrival in each parganah I was attended by the tahsíldárs and local officials, whose reports on the actual produce of the mahál were received and compared with those of former years; and taking into consideration the nature of the season and other circumstances, I was enabled thereby, and from my own observation, to calculate what revenue the parganah could bear. I then received the proposals tendered by the zamíndárs individually (to whom the terms prescribed for the settlement were fully explained), which were compared with the amount yielded in former years agreeably to the patwári's accounts and the difference ascertained; and in cases wherein the offer did not come up to what was expected, and a zamíndár made objections to what I considered a fair and equitable assessment, recourse was had to actual measurement of his crops, and the assets having been ascertained, his right and that of the *sirkár* were defined and settlement of the estate adjusted accordingly. This investigation, which I consider every landholder has a right to expect, was undertaken in every doubtful case, not more with a view to his satisfaction than to my own, and the result frequently proved the necessity of the measure. This mode, which I have had the honour to state as having been adopted in the settlement of one parganah, was extended throughout the district." Taking into account the great difficulties that he had to contend with, the Collector's assessment was wonderfully fair, and with the imperfect knowledge of the capabilities of each estate was just alike to the landholder and the State. Wherever any doubt occurred, it was ruled in favour of the landholder, but never to such an extent as to unduly lower the revenue. The revenue assessed was, as a whole, a very high one, for but little increase was attempted for many years, and in some cases it was found necessary to grant remissions or suspensions of the Government demand. Years of distress arising from drought also occurred, and in a waterless tract like the district, as it then stood, the suffering must have been intense. The details of the assessment are given under the Saháranpur district notice.

The Dehli parganahs given over to Saháranpur.

About the middle of 1805, the parganahs under charge of the Resident at Dehli were transferred to the Collector of Saháranpur. It appears that these parganahs were for a time under the charge of Begam Sumru, and in reviewing her accounts, the Collector asked for explanation as to the highness of the charges for collection. "To this she replied that while the parganahs were under her charge the Marhatta war existed, that no zamíndár paid rent willingly, but attempted in proportion as they had means to withhold the dues of the Sirkár, which is ever the practice in troublous times. Therefore, she was obliged to hire half the inhabitants of a village as matchlockmen to keep the rest in subjection. That while the war lasted

her chief object was to maintain the British authority." Mr. Guthrie corroborates this statement and says as to his own operations that "until Colonel Burn's detachment marched to Saháranpur I found it impossible to realise the revenue or conclude the settlement." He adds;—"I shall make no other remark upon the agreement concluded between me and the Begam than that I am convinced her sincere and avowed attachment to Government will be very beneficially felt in the Duáb."[1] The lands held in farm by the Gújar and other *mukarariddrs* were continued to them; and they agreed to abstain from collecting transit and bazar duties within their respective grants, and for this neither asked nor received compensation. In the Aligarh district, however, considerable sums were paid on this account to the Rajas of Háthras and Mursán.

Second triennial settlement.

The second triennial settlement from 1216 to 1218 *fasli* (1808-09 to 1810-11 A.D.) is thus alluded to in the report of the Commissioners on the first quinquennial settlement (1223 to 1227 *fasli*):—"The former settlement from 1216 to 1218 *fasli* which was intended to have been permanent under the option given to the landholders by Regulation X. of 1807, had, in fact, expired in consequence of the refusal of the authorities in Europe to sanction such permanency, and a resettlement for four years from 1219 to 1222 ought probably to have been, therefore, made in recurrence to the original enactments of section 5, Regulation IX. of 1805. But as Regulation X. of 1812, which announced that refusal, contented itself with providing, prospectively, for the settlement to be formed on the expiration of the decennial period from the conquest, we availed ourselves of its silence in regard to any intermediate measures to leave the former settlement undisturbed. The Collector, Mr. Oldham, accordingly confined himself to the resettlement of the lapsed farms and of those few estates the proprietors of which declined to abide by the existing assessment under the option reserved

[1] On the Begam's conduct at this crisis Mr. Williams has the following note:—"The Begam Sumru herself, a person who in after life traded on that virtue with great profit, gave Colonel Burn (see "History" *postea*) the cold shoulder. The service she had rendered Mr. Guthrie cannot have been disinterested. It was simply something that might be appealed to in proof of her devotion to the British Government, in the event of its ever becoming firmly established. She had shown the same unerring judgment in every previous political crisis, and when the tide turned unmistakeably, she made great capital out of the Collector's well-timed rescue. But the moment for a decisive display of loyalty had not yet come, and her attitude after the relief of Saháranpur was so threatening that Colonel Burn found it necessary to suspend active operations and stand on the defensive. While he was busy with the Sikhs, she was entertaining Holkar's vakils, as well as those of Ranjít Singh, who had also joined the Marhatta confederacy, and although she had sufficient discretion not to compromise herself irrevocably, she actually moved out from Sardhana with hostile intent at the head of eight battalions, 1,000 horse, and 45 pieces of artillery. So little did her European officers trust her that they applied to Colonel Burn for protection, and there can be no doubt that the fall of Díg alone prevented her from openly declaring against us."

to them by Regulation X. of 1807. But these partial arrangements were not submitted to Government as they had effected very little modification of the settlement, except in regard to the admission of new parties to the engagements for these particular estates." This settlement appears to have been a very heavy one, and led to much and many transfers, especially in the Ganges-Káli Duáb. Assessments and drought between them made the year 1223 *fasli* a memorable one for the people of this district. As no general settlement was formed in the conquered provinces for 1219 to 1222 *fasli*, we next come to the account settlement of the first quinquennial settlement, or that for 1223 to 1227 *fasli* (1815-16 to 1819-20 A.D.)

1223-27 *fasli*.

As the greater portion of the district might be considered to have voluntarily abided by the assessment of 1218 *fasli*, and at the time of their abiding by it to have contemplated it as a permanent obligation, so the Board of Commissioners were not prepared for a general decrease at the quinquennial settlement. In parganah Dádri, where Mr. Salter had settled the lapsed *mukarari* of the Gújar Ráo Ajít Singh in 1813, "some changes were expected," write the Commissioners, "but the revenue of the district at large had always been collected, and had led us to repose the greatest confidence in the accuracy of the original settlements formed by Mr. Dumbleton in 1808-09 A.D.; we must therefore confess our disappointment in the result of the settlement accounts (1223-27 *fasli*) now submitted." On receipt of the accounts Mr. Calvert, already in charge of the northern division, was directed to revise the settlements of some of the principal parganahs, but Mr. Calvert's other duties, his long indisposition and subsequent decease, prevented the revision, and the Board was obliged to submit their report in 1819 without attempting any revision. The aggregate assessment for the triennial settlement ending in 1218 *fasli* showed a revenue of Rs. 11,28,243 for the southern division of Saháranpur and Rs. 12,05,679 at the end of 1222 *fasli*. The difference of Rs. 77,436 after deducting Rs. 58,160 for the increase on the lapsed *mukarari* of Dádri, gave a net increase of Rs 19,276 on the partial resettlements made by Mr. Oldham. The total demand for the five years of the quinquennial settlement was-1223, Rs. 11,10,682; 1224, Rs. 11,29,225; 1225, Rs. 11,45,896; 1226, Rs. 11,63,308; and 1227, Rs. 11,88,864, being a decrease of Rs. 94,997 in the first year and of Rs. 16,815 in the last year, and if the parganahs in which an increase was obtained be deducted, the abatements in the first year amount to Rs. 1,08,327. The remissions were, however, individually small except in Dádri and Dásna, where they amounted conjointly to Rs. 66,735 in the first year and Rs. 40,233 in the last year of the first quinquennial settlement, and they would appear from Mr. Shakespear's explanations to have occurred in the rest of the district from the temporary circumstances of the unfavourable season during the formation of the settlement. The single

parganah of Meerut was settled previously to these circumstances having declared themselves at an increase, and although the increase of Rs. 14,404 in the first year was not realized, but, on the contrary, a further balance accrued to an amount of Rs. 48,454, the realization of the entire demand in the subsequent years, with the progressive increase rising to Rs. 20,484 in the fifth year, gave the Board reason to suppose that the rest of the district might in general have similarly been made to yield an improved revenue, notwithstanding temporary causes which influenced the assessment of the first year. The rest of the arrangements merely re-established the assessments of the former settlements. The whole of the settlements were made at a progressive assessment, and the Board saw no good reasons for dispensing with the increase in any instance, however objectionable on general principles.

Details of first quinquennial assessment.

I will now give the details of this assessment for all the parganahs then comprising the southern division of the Saháranpur district, as containing valuable information not only in regard to the settlement itself, but as to the constitution and area of the different parganahs and other local sub-divisions which descended to us from the previous governments, and which have since been so ruthlessly broken up in the various organization schemes that have been sanctioned since the conquest.

Meerut Parganahs.

Parganah in 1816.	Villages.	Estates.	Area in bighas.			Gross produce.	Net produce.	Revenue of			Now in
			Cultivated.	Culturable.	Barren.			1222.	1223.	1227.	
						Rs.	Rs.	Rs.	Rs.	Rs.	
Ajrára, ...	16	9	16,046	5,915	5,094	14,355	12,605	16,457	15,431	16,632	Saráwa,
Bágpat, ...	190	147	87,011	79,960	1,05,982	1,18,329	1,12,352	1,10,453	1,08,841	1,12,905	Bágpat.
Bhojpur, ...	16	12	4,527	1,547	2,241	5,045	4,436	10,738	10,320	10,940	Hápur.
Chhaprauli,	13	18	21,414	10,795	10,496	37,829	33,53[illegible]	38,096	35,590	36,8[illegible]7	Chhaprauli.
Dádri, ...	165	134	48,347	84,997	43,582	83,945	73,915	86,161	50,662	63,621	Dádri.
Dásna, ...	157	144	59,869	70,230	81,437	1,25,515	1,12,054	1,22,258	91,022	1,04,565	Gháziabad.
Garhmuktesar.	133	86	56,974	53,895	52,919	38,516	[illegible]5,279	43,390	41,792	47,002	Garhmuktesar.
Hápur, ...	111	83	45,341	30,395	35,978	53,478	47,574	53,042	48,654	53,250	Hápur.
Loni, ...	106	80	39,570	35,550	43,868	36,775	33 636	37,076	36,382	38,520	Loni.
Meerut, ...	250	214	160,598	46,649	108,416	2,22,412	2,00,774	2,13,023	2,27,425	2,33,504	Meernt.
Niloha, ...	34	39	23,806	8,619	9,762	25,725	22,055	27,727	27,468	28,768	Hastinápur.
Shakrpur,	54	6	19,144	28,003	19,120	21,055	19,191	19,256	18,732	20,429	Various.
Saráwa, ...	72	55	32,266	19,587	32,413	32,726	29,635	32,754	31,315	23,356	Saráwa.
Tikri, ...	2	8	6,711	171	1,504	16,767	14,646	13,100	12,849	13,107	Barnáwa.
Tárápur, ...	2	3	252	1,590	1,675	148	133	200	125	150	Hastinápur.
Jalálabad,...	94	42	48,386	20,580	31,565	52,076	47,512	47,967	47,060	50,337	Jalálabad.
Tanda, ...	10	9	8,076	3,158	1,765	16,300	14,060	12,431	12,131	12,616	Chhaprauli.
Total, ..	1,425	1,089	678,337	501,641	587,819	8,97,996	8,13,392	8,84,127	8,15,802	8,66,509	

Muzaffarnagar Purganahs.

Parganah in 1816.	Villages.	Estates.	Area in bighas. Cultivated.	Culturable.	Barren.	Gross produce.	Net produce.	Revenue of 1222-F.	1223.	1227.	Now in
						Rs.	Rs.	Rs.	Rs.	Rs.	
Bhúma, ...	13	20	7,934	15,826	6,873	5,105	4,550	6,023	5,223	5,816	Bhúma.
Baghra, ...	37	35	30,802	13,508	18,220	28,767	25,085	32,427	30,256	32,461	Baghra.
Gangíru,...	2	4	3,527	4,356	5,326	4,567	3,962	3,915	3,540	3,980	Kándhla.
Jauli, ...	19	12	9,877	20,499	6,459	5,151	4,610	6,190	4,939	5,810	Jánsath.
Kándhla, ...	41	12	25,240	28,660	18,630	48,517	42,703	39,055	1,37,885	40,325	Kándhla.
Kairána, ...	25	31	13,652	16,624	21,695	21,220	18,602	19,033	17,799	19,005	Kairána.
Khátauli,	79	78	59,201	31,972	33,076	46,879	42,186	52,289	45,708	47,669	Khátauli.
Lálukhera,	6	6	5,822	953	539	6,750	5,970	5,875	6,011	6.171	Baghra.
Phugána,	7	10	9,373	5,175	3,565	15,892	13,619	14,200	13,950	14,240	Kándhla.
Shikarpur,	43	44	48,987	12,260	24,091	72,875	65,866	60,012	58 767	60,950	Shikárpur.
Shámli, ...	21	24	27,197	4,750	15,071	50,500	44,222	41,893	36,398	39,567	Shámli.
Soron, ...	6	6	12,276	1,335	5,472	17,200	15,550	14,361	13.926	14,590	Soron.
Sambalhera.	16	16	11,553	13,523	18,011	6,675	5,914	7,415	6,210	7,031	Bhúma.
Titarwára,	8	9	7,435	7,611	4,240	12,667	11,163	10,706	9,765	10,307	Kairána.
Total, ...	323	307	272,876	177,052	181,268	3,42,265	3,04,002	3,13,404	3,90,377	3,07,922	

Mr. Shakespear, who is rather deprecated by Mr. E. Colebrooke, and regarding whose assessment Mr. Holt Mackenzie says that it was so unsatisfactory as to require revision, was almost certainly right although he had not the faculty of justifying his proceedings.

Notes on the assessment.

In regard to parganah Bágpat,[1] the Collector excused the decrease in the year 1223 *fasli* on the grounds that the settlement of the parganah was attended with greater difficulty than that of any other; "not so much from the sufferings occasioned by calamitous seasons, although many villages had strong and well-founded claims to indulgence, as because of the refractory spirit of the zamíndárs, who being well convinced that no one would dare to take their villages in farm, were with difficulty brought into any terms but their own, and the settlement had to be concluded on the only and best terms that could be procured under the urgency of a calamitous season." The Board, naturally enough, objected to these reasons for a decrease, and in their instructions to Mr. Calvert remarked, "that neither the number nor the amount of the abatements which had been allowed in this parganah would have called for any remark, although the settlement in general had

Bágpat.

[1] Parganahs Bágpat and Dásna are now in the Meerut District and Dádri is in Bulandshahr, but an account of them during this settlement naturally falls under the general notice of the southern division of Saháranpur which is given here.

disappointed their expectations, if this result was not ascribed by the Collector himself rather to the refractory disposition of the landholders than to any want of resources to meet the requisition of a considerable increase, and that such a reason for surrendering the just dues of Government was not only unsatisfactory in itself, but must tend to encourage and diffuse a similar spirit from the example of successful opposition; that the same reasons having been assigned for the very large balance which had accrued on the first year's assessments to an amount of Rs. 40,055, the difficulties would progressively increase, and the realization of the assessments, however light, would be daily more precarious, if this avowed disposition to resist or evade the public dues should be thus submitted to instead of proper measures being adopted for the counteraction of it."

Dádri and Dásna.

Some alterations were expected in Dádri in the newly-settled villages of Ajít Singh's *mukarari*, but the Board never anticipated that the decrease necessary would amount to one-half the revenue. They write that "they had seen no grounds in the result of the collections for a period of seven years or from any reports of the Collector, Mr. Shakespear, to look for a defalcation of an entire fourth on an assessment which, in fact, had been paid from the first introduction of British government." In Dásna the Collector excused the decrease on the grounds of the parganah having suffered most severely from drought, "that the settlement was concluded in an unpropitious year, succeeding one that had been still worse, added to the ruinous over-assessment of 1218-22, had occasioned a great but reasonable diminution of the revenue; that villages offered for sale on account of arrears found no purchasers, and that farmers offered much more than they could collect and fell into balance." The Board expressed their desire not to require the highest revenue obtainable by competition or by means not referrible to the actual resources of the tract, and were obliged, though unwillingly, to accept the arrangements made. In the other parganahs the remarks of the Commissioners affect only individual villages, and are not of general interest.

Second and third quinquennial settlements.

The first quinquennial assessment was extended for a second period of five years (1820-21 to 1824-25 A.D.) in every district except Meerut by orders of Government in 1818 A.D. It was during this time that the nucleus of the present district was formed by making Muzaffarnagar the head-quarters of a separate sub-collectorship consisting of ten parganahs, to which seven were subsequently added from Meerut. Mr. W. Dundas took charge of the new district in March, 1824. Two years afterwards the district became the separate charge of a full Collector-Magistrate. In the meantime Regulation VII. of 1822 was passed and attempted to remedy the existing state of confusion as to rights and liabilities by introducing a more accurate and elaborate system of record, but nothing was done until 1825, and so cumbrous was the machinery then employed that

it was found necessary to direct that wherever the inquiry contemplated by the regulation was not completed, a third summary settlement for the years 1825-26 (1233 *fasli*) to 1829-30 A. D. (1237 *fasli*) should be made until such time as the revision was completed.[1] This settlement practically remained unaltered until the revision by Mr. E. Thornton in 1838-41 was effected under the provisions of Regulation IX. of 1833.

Mr. E. Thornton's settlement.

Steps were taken to commence the settlement under Regulation IX. of 1833 as early as 1836, when Mr. Dick commenced the measurements, but the entire district was remeasured by Mr. Thornton in 1838-39 and distributed into circles containing soil of a similar quality. For these circles, average rent-rates were obtained which formed the basis of the assessment. In his treatment of irrigated, or rather irrigable land, Mr. Thornton differed from many other officers. He distinguishes the land actually irrigated during the year of measurement from the land irrigable but not irrigated from wells, or canals, calling the former *cháhi*, and the latter *muhíta cháhi*. His arguments were that "the *rabi* crop of the past year is succeeded by the *kharíf* in the present, and it is not customary to water the *kharíf*, so of that land round a well which is all of that watered in the course of two years only half is irrigated in either one year." This distinction between *cháhi* and *muhíta* was rendered desirable, in his view, in order to get at the real produce of the year. Where money-rents are paid the average rent is to be looked for, but here, where kind rates prevailed, it would have been unfair to have assumed the produce of irrigated land for all the land watered in that year and also for all the land watered in previous years, but not in the year of measurement. The produce of the *muhíta cháhi* land was then calculated as if unirrigated and added to the former and the average of both was taken as the resultant produce of irrigable land. Moreover, the actual amount of land irrigated from a *kuchcha* well was not exclusively considered, but the existence of a substratum which admitted of such wells being reasonably and cheaply made was taken into account. The highly manured and cultivated area close to the village site known as *mísan* or *bárah* was separately calculated, and so much of it was assessed as *mísan* as came up to the average proportion of that class of land to the entire holding (16·5 per cent.), whilst the remainder was entered as *rausli* as some reward for the cultivator's extra industry. In deciding upon this principle of action the unequal state of the cultivation and the pressure of the assessment in individual villages were found to be great obstacles to an equal distribution of the demand. The effects were still visible of the former Government having asserted an absolute

[1] Some account of Mr. Cavendish's revision under Regulation VII. of 1822 in the year 1825 will be found in Mr. Holt Mackenzie's letter in Sel. Rev. Rec., 1822-33, p. 84: Allahabad, 1872. Detailed accounts of the revision in 1820-21, of which I have failed to obtain the general report, are contradictory. In some villages the revenue was maintained throughout, and in others there was a progressive increase said to have been made by Mr. James Fraser.

proprietary right in the soil, and having exacted a full rent from the humbler classes, while it showed peculiar consideration for many of the higher ranks and lowered the demand on them to really a very small sum. Many of the higher classes had no capital to assist their tenants, and, at the same time, were not able to resist the temptation of exacting the highest rent they could get, so that, in many places, agriculture was in a very depressed condition. In many villages the former revenue was assessed at a cultivating rate, and here the new demand was reduced so as to leave a fair margin of profit to the proprietors.

Circles and rates.

Having fixed on homogeneous circles according to soil, the next step was to ascertain fair average rent-rates for each class of soil. To accomplish this, a rental was formed for the whole cultivated area of each denomination of soil in each circle by applying average money-rates to the whole extent of each kind of crop found in that denomination, and then this rental was divided by the sum of the cultivated area of that particular denomination of soil. The result obtained was taken as the average rent-rate for that class of soil in that particular circle. The discovery of the money rates for each kind of produce was a work of some difficulty, for most of the tenures were bháyachára, where no rent was paid, and even where rent was paid, it was, as a rule, taken in kind and not in cash. The only exception to the prevalence of a kind-rate was in the case of sugar-cane, cotton, fodder and maize known as *zabti* crops, for which money-rates were, by custom, always paid. In the case of rent paid in kind, the entire produce of the field was first correctly ascertained, and one-tenth was struck off in lieu of wages for cutting and clearing, then from each remaining maund the landholder was held to take, in *mísan* soil, 18 sers; in *rausli*, 17¼ sers; in *dúkar*, 17 sers; in *bhúr*, 15¾ sers, and in *danda*, 14 sers. To this calculation was applied the average prices ruling, and thus an average rent-rate was obtained. The average *zabti* rates per acre were sugar-cane, Rs. 14-7; cotton, Rs. 6-6-5; fodder, Rs. 2-6, and maize, Rs. 3-3-6. In deducing these rates a proportion of three biswas per bígha was allowed for failure of crop, being the average found to have been actually allowed over a large area. The amount of *rabi* produce was calculated by selecting three or four villages in each circle and estimating the actual produce of the standing crops field by field. The total produce of each crop in each class of soil was then divided by the number of bíghas of that denomination of soil, and the result was an average produce-rate per bígha for each crop in such class of soil. And in addition, average produce-rates were compiled from the village accounts of division of crops for a period of fourteen years. The *kharíf* rates were entirely derived from the latter source. The actual produce having been found, the average of the money-rates for the previous twenty years was then applied to the produce totals to give the estimated rental, and the revenue-rates were found by deducting 35 per cent. from

the average rent-rates. The result of the assessment of the portion of the district settled by Mr. Thornton was an increase of the revenue from Rs. 5,83,937 in 1838 to Rs. 6,72,740 in 1859-60, or taking resumed revenue-free lands into account, to Rs. 7,03,544. Parganah Thána Bhawan was settled in the Saháranpur district by Mr. E. Thornton in 1838-39, before its transfer to this district in 1842.

Sir H. M. Elliot and Mr. T. C. Plowden.

Parganahs Bhúma Sambalhera, Kairána, Kándhla, and Shikárpur were settled by Sir H. M. Elliot whilst still in the Meerut district, and parganah Budhána, which formed a part of Begam Sumru's *jágír*, was settled by Mr. T. C. Plowden. Sir H. M. Elliot had much difficulty in ascertaining the rent-rates which formed the basis of his assessment. Throughout Meerut, as in Muzaffarnagar, rent in kind prevailed and where cash-rents were customary, they were formed merely by distributing the Government demand by *bákh* over a certain number of bíghas. Unlike Mr. Thornton, Sir H. M. Elliot, in a great measure, disregarded soil distinctions and adopted a parganah rate for irrigated and unirrigated land alone. This rate was formed by converting the average produce rates of wet and dry soils[1] into money-rates at the average market-value of the day and testing the result by the statistics of rent-suits, the close examination of standard villages and personal inquiries. The averages on the total and the cultivated area were then drawn out, and wherever they appeared exorbitantly high or unreasonably low, a local inquiry was held to ascertain the cause of these inequalities. Regard was also had to circumstances which should have due influence in fixing an assessment, such as the state of the village, whether deserted or in good repair; the prevalence of cultivation by non-resident tenants *(pahikásht)*; the amount of culturable waste; facility of land or water carriage; the past fiscal history; the nature of the soil; the caste of the cultivators; the depth of the water from the surface; the unanimity or discord of the community; the population generally; previous transfers of rights, and the nearness to markets. All these matters were taken into consideration before assessing the Government revenue. Mr. T. C. Plowden's mode of assessment is described under the Meerut district. Both these settlements were confirmed for a period of twenty years, and during their currency worked very well. The following table shows the demand, collections, and balances for the four years preceding the revision in 1860-61 :—

Year.	Demand.	Collections.	Balance.	Year.	Demand.	Collections.	Balance.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
1856-57, ...	11,12,029	11,10,507	1,523	1858-59 ...	11,17,633	11,08,136	9,317
1857-58, ...	11,13,049	11,02,837	10,212	1859-60 ...	11,17,804	11,08,432	9,371

[1] In most of his assessments he appears to have had no soil records to go on, but where he had them, he took them into consideration. I., Set. Rep., 180, 204.

Mr. Thornton's assessments were, as a rule, moderate, but Messrs. Plowden's and Elliot's were generally full, and in the case of cultivating communities mercilessly so; but Mr. Thornton only took 65 per cent. of the assets, while the latter officers looked to 80 per cent. as their standard.

New settlement, 1860-63.

Preparations for the new settlement commenced in April, 1860, under Mr. H. G. Keene, with Mr. A. Colvin and Rái Nának Chand as his assistants. Mr. Keene left the district on furlough after having assessed parganahs Gordhanpur, Budhána and Shikárpur, and was succeeded by Mr. S. N. Martin, who completed the settlement. Mr. Martin himself assessed parganahs Muzaffarnagar, Baghra and Púr Chhapár. Mr. A. Colvin assessed parganahs Bidauli, Kándhla, Kairána, Shámli, Jhanjhána, Thána Bhawan and Charthawal, and Mr. C. Grant assessed parganahs Bhukarheri, Bhúma Sambalhera, Jauli Jánsath, and Khátauli. The final report was received in 1867.

State of the district in 1860-61.

When the settlement operations commenced the district had not recovered from the effects of the mutiny. "The returns of 1866," writes the Commissioner, "confirms the fact shown in the revised settlement returns, that when the revision was in progress there was a marked diminution of the agricultural population as compared with the number in 1853. This may be ascribed to the disturbances of 1857 and the famine in 1860-61. In the first many were killed in fights among the people themselves, many absconded and have settled in other parts of the country, and an inconsiderable number fell in engagements with the troops. But the decrease principally occurred owing to the famine. In spite of the exertions made to save life and support the distressed population, there is no doubt that a large number died of destitution and consequent sickness; many removed to districts not affected by the drought; and though, perhaps, most of these have returned, some remained in their new homes. The non-agricultural population was less affected, because, in the anarchy, the large communities were not so open to attack as small villages, and were more easily assisted by the authorities; and in the famine[1] measures for relief could be better organized,

[1] See further under "Famines." The loss to the district by the mutiny seems to me to be much overstated by Mr. Williams. He assumes the figures of the census to be absolutely trustworthy, but the details of even those of 1865 and 1872 are not so. The totals of the latter two enumerations are fairly correct, but the discrepancies in details are irreconcileable. In 1865 the day-labourer class was called agricultural, and in 1872 non-agricultural. Five hundred would cover the numbers killed or hanged during the mutiny, and since then the railway has brought many labourers into the district. The famine certainly caused some loss and some emigration took place, but almost entirely within the district. It is a mistake to suppose that the agricultural population is more affected by a famine than the non-agricultural. When a village is deserted the weaver goes first, then the Chamár, and last of all the actual cultivator. The villages of the Thána Bhawan parganah are the only ones, except, here and there, a few villages in the Ganges *khádir*, that were seriously injured by the mutiny, and on the Jumna, the lawlessness of the Gújars will account for the state of Bidauli.

and were therefore more successful in towns than they could be in scattered hamlets." In addition to famine, towards the close of the year, cholera made its appearance and swept over the western parganahs of the district. It was with a district weakened by war famine and pestilence that the settlement officers had to deal. As we have seen, cultivation had decreased in several parganahs: in Thána Bhawan by 8·7 per cent:, and only 70·8 per cent, of the assessable area was cultivated; in Jhanjhána there was a decrease of 15·4 per cent. in cultivation, showing only 56·8 per cent. of the assessable area under cultivation; in Bidauli the figures were 17·1 per cent. and 49·9 per cent. respectively, and in Kairána 15·5 and 67·8 per cent. Taking the whole district, the land-revenue by the settlement of 1840 amounted to Rs. 11,19,839 at an assessment based on 66·66 per cent. of the assets, and had the assessment been at half assets the Government share would have been only Rs. 8,39,879. At the revision in 1860-62 by Messrs. Keene, Colvin, Grant, and Martin, the demand was fixed at Rs. 11,40,644, giving a potential increase of Rs. 3,00,765 and an actual increase of Rs. 20,805 on the previous assessment. This enhancement is attributed to the increase in the total cultivated area, the resumption of revenue-free grants and the great advance in canal irrigation. Rents, whether in cash or in kind, would appear to have remained almost stationary during the currency of Mr. Thornton's settlement, while prices rose a little and the average amount of produce raised from a given area, the mode of cultivation and the proportion of each class of crop grown had not materially altered in 1861. Omitting the six parganahs, the revenue of which was revised by Mr. Cadell, and parganah Gordhanpur, reported on by the same officer, the former demand amounted to Rs. 7,60,692 and the revised demand to Rs. 7,41,773, showing an increase, if assessed at two-thirds of the assets as before, of Rs. 1,71,254 and an actual decrease at half assets of Rs. 18,919 on the previous assessment. I shall now give the results of the revision in 1861 and Mr. Cadell's revision of a portion of the district. The statistics of area for the ten parganahs the revision of which in 1860-62 was confirmed are given in detail under the district notices.[1]

Mr. Keene.

The mode of assessment adopted by Mr. Keene appears to have been as follows:—The total area and rental for five years were obtained from the village papers, and the latter was divided by the former, thus giving a produce value which applied to the cultivated area at settlement gave what corresponded to the estimate of the village accountant of the old surveys. Again, where rent was paid in kind, average rates were formed by the application of Mr. Thornton's previous appraisement to the mean area devoted for five years to the various crops for which rent was paid in kind. This result was added to the average rates for crops for which rent was paid in cash, and in calculating the market value of grain the average prices for

[1] See also page 350.

ten years preceding the drought of 1860-61 were taken. Again the circle rates of the previous settlement were applied to the soil area of the new survey and the result was compared with the produce rates already ascertained. Mr. Keene adds:—"Finally, I have found in working after such men as Elliot (H. M.) and Thornton that a proportional increase on their rent-rolls, with a due allowance for the advance of prices since their day, will often yield a sum curiously corresponding to the results of other and quite independent estimates."

Mr. A. Colvin.

Mr. Colvin, whilst basing his assessment mainly on the same system, found reason to alter the process in various parganahs. In Bidauli there was an all-round rate on the culturable area. In Thána Bhawan, at the time of survey, cultivation was almost entirely confined to the irrigated tracts, and there the crops were exceptionally rich. Mr. Colvin's soil rates were there checked by the rates adopted by Mr. Thornton for the neighbouring circles. "The cash rents found existing for the several classes of crops paying in cash were applied ordinarily to the area in each circle occupied by their respective crops. To the area occupied by crops paying in kind, estimates of the produce were applied with the value of the landlord's rent expressed in money. Mr. Thornton's revenue-rates were also used, Mr. Keene enhancing them in the parganahs assessed by him in the proportion in which he believed prices to have risen." The summary rates used at the last settlement on irrigated and unirrigated land were also referred to. Messrs. Martin and Grant seem to have adopted the same procedure; in fact, all through the principles and data given by Mr. Thornton in his settlement report in 1841 were accepted, and form to a great extent, the basis of the revised assessment. The following statement shows the results of the revision in 1860-2, which have not yet been sanctioned by Government:—

Parganahs.	Old demand.	New demand, 50 per cent.	Old rate on cultivation.	New rate on cultivation.
	Rs.	Rs.	Rs. a. p.	Rs. a. p.
Shikárpur, ...	1,06,052	1,03,301	2 6 7	2 2 1¼
Budhána, ...	75,017	69,846	2 3 7	1 15 8
Shámli, ...	1,20,316	1,20,057	2 10 0	2 10 3
Kairána, ...	49,571	52,307	1 11 2	1 8 10½
Kándhla, ...	1,00,759	1,11,410	2 4 8	2 3 5
Baghra, ...	86,362	81,691	2 3 0	1 15 11
Charthawal, ...	65,410	61,257	1 10 5	1 6 1
Thána Bhawan, ...	56,244	57,081	1 13 7	2 0 11
Jhanjhána, ...	63,056	65,698	2 2 1	2 4 3
Bidauli, ...	37,905	29,125	1 8 5	1 6 8
Total, ...	7,60,692	7,41,773	2 1 6	1 15 1

Revision with reference to a permanent settlement.

Some short time after the revision had been completed, and before the final report had been submitted, the Secretary of State's despatch of 1865 arrived and necessitated an examination of the settlement papers in order to ascertain what estates were eligible for permanent settlement under the rules. This examination was carried through at once, and with the exception of parganahs Bidauli and Gordhanpur and certain estates liable to fluvial action, the great majority of the estates which showed 80 per cent. of their culturable area under cultivation were recommended for permanent settlement. In seven estates an enhancement of Rs. 555 was recommended, and in 21 estates it was proposed to raise the revenue from Rs. 20,029 to Rs. 21,718 preparatory to declaring the assessment perpetual. The general result of Mr. Martin's recommendations and examinations was as follows :—

	No.	*Revenue.* Rs.
Estates altogether qualified, the proprietors of which accept the terms offered, ...	755	8,72,581
Ditto, the proprietors of which refuse, ...	60	92,197
Total qualified estates, ...	815	9,64,778
Estates with excess of culturable waste, the enhanced revenue of which was accepted by the owners, ...	21	20,730
Total estates pronounced fit for permanent settlement,	836	9,85,508
Estates with excess of culturable waste, the proprietors of which refuse to accept terms, ...	93	71,466
Excluded as unfit for permanent settlement, ...	190	66,093
	283	1,37,559
Enhanced revenue of seven under-assessed estates, ...	7	555
Total enhancement proposed, ...	21	1,689
	28	2,244

A second despatch, imposing additional conditions before permanency could be granted, was received in 1867, and in 1868, Mr. A. Cadell was deputed to make the necessary inquiries. I give Mr. Cadell's account of his proceedings in his own words :—"The first step was to make out lists of estates with less than 80 per cent. of the culturable area under cultivation. Parganahs Gordhanpur and Bidauli and the river valleys were also excluded on account of their exceptional position or circumstances, and the regular investigation extended only to estates which were returned as generally qualified under the 80 per cent. rule. With reference to the vast majority of these it was found that either there was a probability of the introduction or extension of canal irrigation, and a consequent important increase of the assets or that the assessment was so low that permanent settlement could not be recommended. In the nine parganahs lying to the west

of the west Káli river, out of 579 revenue-paying estates, 395 were eligible under the 80 per cent. rule; but only 78 were recommended for permanent settlement, and even with reference to them it was proposed that the permanent assessments should be stated in produce, the money value of which could be calculated anew at such intervals as Government might appoint. The revenue of these 78 estates amounted to Rs. 1,44,898, or about one-eighth of the demand for the whole district. In the Ganges canal tract lying to the east of the west Káli the assessments were found to be so generally low and unequal, that not only no recommendations were made for permanent settlement, but eventually the settlement of the upland portions of six parganahs was disallowed by Government Resolution No. 118B of the 25th March, 1870, and a revision of the Government demand, preceded by a testing and correction of the entries of soil and irrigation, was ordered to be taken in hand."

Remarks on a permanent settlement.

As to a permanent setttlement, Mr. Colvin wrote, in 1861, that "a permanent settlement may do well, but any one who travels through this district, and listens to the tales of its condition forty years ago will confess that temporary settlements have done well too. The maps show how closely the villages lie together, and the census shows a population of 409 to the square mile. But neither map nor census can give an accurate idea of the teeming life, the innumerable wheat-fields, the long stretches of cane cultivation, the busy wells, the variety of large tracts of uncultivated land, the prosperous stir of villages and agricultural towns. The people say that, under a permanent settlement, if Government takes no increase, neither will it give any relief. They think, too, that when it ceases to be directly interested in the land, it will be averse to expending money on works for improvements in agriculture. Experience, they say, has taught them that the Government has been true to its word when it said they should be left alone for thirty years. They see that at the expiry of that term no greedy hand has been laid on their villages, and that Government did not hold off merely to grasp at the end. They acquiesce in and understand the re-adjustment of the demand, and hence they scarcely know whether to be more pleased at the advantages or frightened at the dangers of a permanent settlement." Nothing, fortunately for the country, has since, been done to carry out this idea of a permanent settlement which could possibly have benefitted no one but the money-lenders and land-speculators.

Mr. A. Cadell's revision.

In October, 1870, Mr. Alan Cadell commenced the revision of the assessment of the parganahs watered by the Ganges canal, comprising Khátauli, Jánsath, Muzaffarnagar and the upland portions of Púr Chhapár, Bhukarheri and Bhúma Sambalhera. Before this revision had been completed, the portions of Bhukarheri and Bhúma Sambalhera situated in the Ganges *khádir* as well as those of Púr Chhapár and

Gordhanpur, bordering on the Soláni, had so deteriorated from the increase of marsh and *reh* that the assessments of many villages in these tracts had to be reduced. The revision leading to reduction was of a summary nature, and as the records were not recompiled, the statistics relating to the lowlands all through are those of Mr. Martin's assessment. As regards Gordhanpur and Bidauli some misapprehensions were felt as to whether the assessments of 1860-62 were to stand only for ten years as recommended by Mr. Martin or for whatever period might be sanctioned for the other parganahs. In Bidauli the settlement was allowed to stand as in the adjoining parganahs, and in Gordhanpur any alteration of the assessments as against the people was prohibited. In Gordhanpur, as in the adjoining parganah of Púr Chhapár, the deterioration which began before the mutiny has continued ever since, due partly to the diversion of the course of the Soláni and partly, most probably, to percolation from the Ganges canal. The consequence of this is that in thirty-nine estates in Gordhanpur and in six estates in Púr Chhapár annual assessments have become necessary. The assessments in Gordhanpur are noted under the account of the parganah given hereafter.

Revision practically a new assessment.

In the Ganges canal tract, the revision of settlement was regular and involved a complete reconstruction of the records. It was at one time hoped that the delay and expense of a complete regular revision could be avoided, but the settlement officer found it impossible to assess with confidence on areas which in some parganahs had been shown to be very erroneously recorded, and it was, at length, resolved to make a detailed settlement. Mr. Cadell, however, adopted the distribution of villages into circles made by his predecessors, and following so closely upon Messrs. Martin and Grant, he assessed the tract, parganah by parganah. This involved an amount of detail and repetition of objects and reasons which he, afterwards, came to consider excessive, and there seems little reason for adhering to this system of small parganahs hereafter. In the arrangement of villages by circles, the system of Mr. Thornton coincided generally with that of Sir H. M. Elliot and Mr. Plowden, though the circles in the parganahs formerly assessed in the Meerut district were somewhat larger than those made by Mr. Thornton, but in the classification of soils there was much divergence. As already noted, Sir H. M. Elliot adopted a rate on wet and dry areas in the absence of any minute classification of soils, whilst Mr. Thornton framed rates for *mísan*, *rausli*, *dákar* and *bhúr*, a system in which he was followed by Mr. S. N. Martin.[1] Mr. Cadell followed generally the example of Mr. Thornton in his soil distinctions, but he did not adopt Mr. Thonton's entry of *mísan* as manured land. In his rent-rate report for Khátauli Mr. Cadell discusses the subject as follows :—"In thus departing from

[1] See page 347.

the system of Mr. Thornton, I think I have been justified by the experience of his successors, by the customs of the country, and by the success which both at the old and recent settlements had attended the more simple method of assessment in Meerut. In 1863 the soil classification of Mr. Thornton was strictly adhered to for the purposes of assessment, but when rents came to be fixed it was at once abandoned as impracticable, and rent-rates were fixed for irrigated land, for dry loam and clay, and for sand. There can be little question that in reverting to this simple classification Mr. Martin was in the main right; for the opening of the canal had in a great measure abolished the distinction between clay and loam, while, on the other hand, to have fixed higher rates for the so-called manured land would have been to adopt a system difficult of acurate application and opposed to the customs of the country; for the whole tendency of Ját and Ráwa cultivators is to secure a large average produce, rather than the excessive large average of a few fields. Instead of restricting high cultivation to a small area round the village site, the Játs of the upper Duáb grow the best crops in every portion of the township in which they live, and far beyond its boundaries; and as irrigation is nearly as necessary for high farming as manure, facilities for irrigation must be studied as well as vicinity to the homestead."

In this way the classification adopted at the revision was about half way between the ultra-simplicity of the Meerut system and the more detailed entries made by Mr. Thornton and corresponded very closely with the system adopted by Mr. Thornton in Saháranpur. The soils recorded were wet and dry, *bárah* or garden land, *rausli* or loam, second *rausli* or sandy loam, and *bhúr* or sand. Of the *bárah* land there was only 0·05 per cent. on the total cultivated area, so that it was of use only for particular villages. The second *rausli* was designed to include all that land which combined some of the characteristics of both loam and sand. Mr. Thornton provided for such cases by ruling that doubtful cases should be classed with the inferior denomination, but, in practice, such rules are enforced with difficulty, and it has been found that the more the subordinate officials of the settlement are looked after, the more likely they are to show their zeal for Government, or rather to shield themselves from blame, by making their soil entries tell against rather than in favour of the people. Second *rausli* is a better soil than pure sand and the surveyor felt satisfied and secure in recording it, while the assessing officer could suit his rates to its value on inspection. Again, in the classification of villages, Mr. Cadell paid less attention than his predecessors to the situation and more to the quality of the estates. In each parganah there were three circles comprising villages of the first, second and third class, and to each of these circles the rates given in the parganah notices were applied for each class of soil. These rates, as far as the northern

Soils.

parganahs are concerned, correspond generally with those assumed and levied in the parganahs of Saháranpur to the north, and those for the southern portions of the tract are borne out by the rates recently assumed for the adjoining parganahs of the Meerut district.

The assumed rent-rates gave the following results as compared with those of Mr. Thornton's and Mr. Martin's settlements, the rent-roll of the former being deduced from the assessments which are assumed to have been made at two-thirds the assets, and that of the latter being the result of the application of the assumed rent-rates to the recorded soil areas :—

Comparison with previous assessment.

Parganah.	Assumed rent-roll in			Excess of 1872 over	
	1841.	1863.	1872.	1841.	1863.
	Rs.	Rs.	Rs.	Rs.	Rs.
Púr Chhapár, ...	85,401	1,44,648	1,31,776	46,375	—12,872
Bhukarheri, ...	73,958	1,31,232	1,48,385	74,427	17,153
Muzaffarnagar, ...	90,970	1,56,467	1,59,823	69,553	3,356
Khátauli, ...	1,00,461	1,22,997	1,92,497	92,036	69,500
Jauli Jánsath, ...	85,638	1,09,259	1,81,69	96,060	72,439
Bhúma Sambalhera, ...	54,776	71,296	95,246	40,470	23,950
Total, ...	4,90,504	7,35,899	9,09,425	4,18,921	1,73,526

The assumed increase to the rent-roll made by Mr. Martin amounted to almost exactly 50 per cent. of the rent-roll of 1841, whilst that by the rent-rates of Mr. Cadell's revision amounted to nearly 85 per cent. But when the figures for each parganah are examined, it is found that the calculations of Mr. Martin and Mr. Cadell for the three northern parganahs give a very similar result, whilst in the three southern parganahs, the assumed rent-roll by Mr. Cadell's rates exceed that by Mr. Martin's by no less than 54 per cent. In the northern parganahs Mr. Cadell's assumed rent-roll exceeds that of 1841 by 76 per cent., whilst in the southern parganahs the excess is no less than 94 per cent. In Mr. Cadell's opinion this, in a great measure, is due to the fact that Mr. Thornton's assumed rates were extremely low in parganahs Jauli Jánsath and Khátauli, and are distinctly opposed to those fixed for the adjoining tracts in the Meerut district and to the facts recorded in the settlement papers. However this may be, it seems unquestionable that the rent-rates assumed by Mr. Thornton and Sir H. M. Elliot for very similar tracts cannot both be right, and the same may be said of those assumed in more recent years on either side of the district boundary, by Mr. Martin to the north and Mr. Forbes to the south.

Increase equitable and just.

In support of his estimate of increase in the rental assets, Mr. Cadell refers to a rough calculation of the increased rental due to the extension of irrigation and cultivation. In the northern parganahs, an increase in the area under irrigation of 61,256 acres would at the moderate rate of Rs. 2 per acre, recently assumed by the Board of Revenue for the calculation of canal profits, give an increase of Rs. 1,22,512, whilst the 23,046 acres of new cultivation would at a moderate second *rausli* rate of Rs. 2 per acre give a further addition of Rs. 46,092, making the old rental Rs. 4,18,233, or a little more than Rs. 20,000 below the rental by the assumed rates. In the southern parganahs, however, a similar calculation furnishes very different results. The extension of irrigation, at the same rate of Rs. 2 per acre, adds to the rental Rs. 79,486, and an addition of 19,528 acres to the cultivated area gives a further sum of Rs. 39,056, making in all Rs. 3,59,417, or Rs. 1,10,024 less than the assumed rental. It is true that the improvement in cultivation has been even greater in the southern than in the northern parganahs, and that while the additional rental due to canal irrigation can hardly, in the northern parganahs, be so much as Rs. 2 per acre, owing to the prevalence of poor soil; a slightly larger increase might be credited in the southern tract; still the effect of such modifications would be comparatively slight, and the broad fact remains that the rental now assumed for the southern tract is justifiable on general grounds, only on the assumption that the old rates were unduly low. The assumed rent-rates were based on rent-rates collected from villages throughout the six parganahs, and in their fixation the settlement officer was assisted by applications for commutation from rent paid in kind, to rents paid in cash, and by personal experience in the management of estates held under the Court of Wards.

Result of the assessment.

These new rates were, on the whole, distinctly higher for the better and distinctly lower for the inferior soils than those assumed by Mr. Martin, and even by Mr. Thornton, and the largely enhanced rent-roll which they yielded was mainly due to the great change which had been worked in the condition of the land by the opening of the Ganges canal. In 1841, irrigation was general in Khátauli alone; Púr Chhapár and Bhukarheri were almost entirely unirrigated, and in the remaining parganahs irrigation was partial and insufficient. Within a few years of the opening of the canal, by far the greater portion of the tract was provided with water, and cultivation rapidly increased as well from the existence of water as from the economy of canal irrigation, which set free much labour of men and cattle for other agricultural works. The general statement of area at the revisions in 1841, 1861, and 1874 will be found under the notices of each parganah,[1] and the general result need only be given here.

[1] See page 350 *anté*.

Comparative statement of area in Ganges Canal Tract.

Total area.	Barren.	Revenue-free.	Total not assessable.	Groves.	Old waste.	Recent fallow.	Total culturable.	Cultivated.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1841, ... 358,846,...	48,913	25,670	74,583	1,491	28,952	32,397	62,840	221,423
1874, ... 364,057,...	47,701	25,018	72,719	2,381	18,990	5,970	27,341	263,997
Difference + 5,211...	−1,212	−652	−1,864	+890	−9,962	−26,427	−35,499	+42,574

Of the land irrigated otherwise than from the canal only 949 acres are watered from tanks, ponds and rivers. The general result of the foregoing statement is that the cultivated area had largely increased, and the irrigated area by 100,999 acres, while in 12,645 acres more canal irrigation, almost invariably flush, had been substituted for laborious irrigation from wells and ponds, so that in parganahs Khátauli and Jánsath especially, labour had to a very considerable extent been liberated.

Increase in population.

But even without these advantages the effect of the canal upon cultivation was rapid and important: the certainty of a return for their labour gave fresh heart and energy to the people; a year of drought no longer brought privation and ruin, but in many cases carried with it exceptional prosperity. During seasons of scanty rainfall, people from the dry tracts migrated into the protected villages and increased the population, and thus gave labour for increased cultivation. The comparative crop statement, given on a previous page, shows the distinct progress that has been made. If, then, the increase in the assumed rental has been very great, the addition to the area under cultivation has been very important, whilst the increase in the irrigated area has been enormous and the improvement in the cultivation has been marked. The assumed rates were generally followed in assessment except in parganahs Jánsath and Khátauli, in both of which the increase required by the rates was so great that it was deemed unadvisable to take the whole of it. When these parganahs were settled, progressive assessments were forbidden, so that it was impossible to moderate the effect of a large enhancement of the demand by making it gradual. The assessments of the upland portions of the six parganahs in 1841 in 1863, and by the assumed rates and as actually fixed, are given in detail in the parganah notices, and the general result was as follows:—

Revenue in 1841.	Revenue in 1863.	Revenue by assumed rates.	Revenue now paid.	Increase over 1841.	Increase over 1863.
Rs. 3,28,984.	Rs. 3,47,851.	Rs. 4,52,833	Rs. 4,41,093.	Rs. 1,12,109.	Rs. 93,242.

Enhanced rental since assessment.

Long before the completion of the records, the assumed rates and new assessments were sufficiently justified by the rent-rolls which for five years, 1276 *fasli* (1868-69) to 1280 *fasli* (1872-73) stood as follows without any correction for seer or for under-rented land :—

Parganah.	1276 fasli.	1277.	1278.	1279.	1280.	Total of five years.	Average.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Púr Chhapár.... ...	1,78,706	1,89,170	1,51,185	1,49,286	1,37,104	8,05,451	1,61,090
Muzaffarnagar, ...	1,40,196	1,56,871	1,58,000	1,58,519	1,47,632	7,61,218	1,52,244
Bhukarheri, ...	1,31,155	1,48,231	1,36,518	1,36,596	1,49,478	7,01,978	1,40,396
Jánsath, ...	1,60,808	1,70,599	1,67,374	1,61,316	1,62,619	8,42,716	1,68,543
Khátauli, ...	1,57,634	1,76,379	1,71,114	1,73,073	1,79,334	8,57,734	1,71,547
Bhúma Sambalhera, ...	76,341	91,186	82,468	83,279	90,996	4,24,270	84,854
Total, ...	8,65,040	9,32,436	8,66,659	8,62,069	8,67,163	43,93,367	8,78,674

The large enhancements of the revenue in the upland parganahs were followed by reductions in the valley portions of parganahs Púr Chhapár, Bhukarheri and Bhúma Sambalhera, as also in the valley portion of parganah Gordhanpur. These reductions, which have already been mentioned, amounted to Rs. 8,841 on the revenue assessed in 1841 and to Rs. 7,327 on that fixed in 1863, the percentage of decrease being 41 and 36 per cent. respectively.

Improvement still expected.

The records and statistics of the revised settlement bring to light facts differing distinctly from those formerly recorded. Notwithstanding increased assessments, the price of land has steadily and rapidly risen, and twenty years' purchase of the land-revenue is now an ordinary and not an exceptional price in fairly assessed estates. More careful investigation, too, has shown that the holdings of the tenantry and of cultivating proprietors are much more substantial than was thought to be the case ten years ago, and that the cultivating proprietors and the occupancy tenants are still gaining ground and that the subdivision of holdings has not yet become undesirably minute. If, during the period of the current settlement, the prosperity of the cultivating proprietors and occupancy tenants—the back-bone of the population—can be maintained, there is every likelihood that in this, as well as in the adjoining districts, the increase to the revenue obtained at the recent settlements will be trifling compared with that which may be safely taken when the present settlements expire. Already the prices of agricultural produce, which a few years ago seemed so exceptional that their continuance could not be reckoned upon, have become normal, and rent-rates have risen in consequence. In Muzaffarnagar, as in Meerut, though to a less extent, the proportion of the revenue to the rental is steadily decreasing, and the rent-rolls of hundreds of villages show the moderation which has been shown at the recent assessments,

and the large enhancement which may be looked for at the next revision. The upper Duáb is now beginning to emerge from the transition state which has continued since the opening of the canal. Time has now shown how distinctly prices have risen, how rapid and important has been the improvement in agriculture, how large the increase in the cultivated area, and how enormous that of the area capable of irrigation. The rent-rates of the various classes of soil, owing to a variety of reasons, have not risen so much as might have been looked for, but gross rentals have been enormously enhanced to such an extent, indeed, that no settlement officer has attempted to assume as permanent a state of affairs which every succeeding year shows more clearly to be indicative of a steady progressive rise in prices and in rents.

The following statement shows the official record of demands, collections, and balances for a series of years :—

Year.	Demands.	Collections.	Balances.	Particulars of Balance.			Nominal.	Percentage of balance on
				Real.				
				In train of liquidation.	Doubtful.	Irrecoverable.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs	Rs.	Rs.
1860-61, ...	11,45,361	10,04,562	1,40,799	1,33,967	...	6,522	310	12·29
1861-62, ...	11,16 904	10,81,114	35,790	17,704	...	9,593	8,493	3·20
1862-63, ...	11,36,222	10,56,212	80,010	1,828	1,212	3,797	73,173	7·04
1863-64, ...	11,34,031	10,37,763	96,268	...	...	...	96,268	8·48
1864-65, ...	11,26.421	10,33,395	93,026	...	...	...	93,026	8·26
1865-66, ...	11,22,958	10,36,244	86,714	...	...	...	86,714	7·72
1866-67, ...	11,21,590	10,77,206	44,384	261	...	...	44,123	3·95
1867-68, ...	11,19,949	10,76,766	43,183	...	...	...	42,183	3·58
1868-69, ...	11,19,760	10,53,392	66,368	23,985	...	...	42,283	5·93
1869-70, ...	11,20,171	10,78,218	41,953	364	...	...	41,589	3·75
1870-71, ...	10,87,383	10,84,673	2,710	2,584	...	...	126	0·25
1871-72, ...	11,41,406	11,39,545	4,861	1,243	...	...	618	0·11
1872-73, ...	11,40,637	11,35,659	4,978	2,927	...	...	2,051	0·26
1873-74, ...	11,43,875	11,34,580	9,295	364	...	...	8,931	·03

Tenures.

The tenures which prevail most throughout the district are the various forms of *pattidári*. In some of the local reports these tenures are divided into three classes, perfect and imperfect *pattidári* and *bháyachára*, and are thus defined. Where the shares are known as so many portions of a bígha and are so recorded in the proprietary register, and the responsibility of all the sharers for the general liabilities continues, the tenure is called imperfect *pattidári*. Here, although the responsibility remains intact, the accounts of the pattís are really kept separate, and as soon as the common land *(shámilát)* is divided, the tenure becomes perfect *pattidári*. In process of time the land becomes minutely subdivided and the divisions of the village lose the character of pattís, and the land actually in each man's possession becomes the measure of his rights, and hence arise the *bháyachára* tenures

so numerous in this district. Sometimes the shares both in perfect and imperfect *pattidari* estates correspond to portions of a rupee, or even the number of ploughs, but the unit is usually a bígha, which is divided as follows: one bígha makes 20 *biswas;* one *biswa*, 20 *biswansis;* one *biswánsi*, 20 *tiswánsis;* one *tiswánsi* 20 *kachwánsis;* one *kachwánsi*, 20 *anwánsis*, &c. The following table gives the perfect and imperfect *pattidári* tenures under one head and exhibits the local distribution of the tenures as recorded in 1860-63: —

Statement showing the tenures in the district.

Parganahs.	Zamíndári.	Pattidári.	Bháyachára.	Total.	Parganas.	Zamíndári.	Pattidári.	Bháyachára.	Total.
Shámli, ...	4	5	68	77	Kairána, ...	11	14	32	57
Kándhla, ...	10	17	51	78	Gordhanpur, ...	...	...	...	...
Thána Bhawan, ...	15	16	33	64	Bidauli, ...	8	10	36	54
Budhána, ...	1	22	21	44	Muzaffarnagar, ...	17	9	40	66
Shikárpur, ...	3	27	32	62	Bhukarheri, ...	37	30	3	70
Baghra, ...	14	29	32	75	Púr Chhapár, ...	14	2	40	56
Jhanjhána, ...	7	14	44	65	Jánsath, ...	18	39	6	63
Charthawal, ...	11	27	28	66	Bhúma, ...	47	38	2	82
Khátauli, ...	41	12	29	82	Total, ...	258	306	497	1,061

Sharah-nakdi tenures.

Up to the present settlement a kind of *talukadári* tenure existed in thirty-five villages held by communities possessing occupancy rights and known as the *sharah-nakdi* villages. At Mr. Thornton's settlement a certain fixed rate was laid down in the record of rights of these villages, and as long as this was paid the proprietor was entitled only to a deduction, usually amounting to eighteen per cent., as *malikána*. The consequence of this was that in some estates, like Luchaira, the proprietors were not able to enter their villages, the entire management being in the hands of the cultivators, who dug wells, planted groves, and exercised all rights, whilst in others, like Mustafabad, the proprietors were able to compel the cultivators to resign their privileges. The Board of Revenue abolished these rights at the settlement in 1863, substituting in lieu of them money rents for the cultivators, who have thus been reduced to the position of ordinary occupancy tenants. The change, however, is, in some measure, to be regretted, for the village communities, having the inducement which perfect security during the term of settlement afforded, did much to improve their estates, and brought them quite up to the standard of those villages in which the community were able to purchase the proprietary rights from the Sayyid owners, and little, if at all, behind those estates possessed by *bháyachára* communities in the western parganahs. "Indeed," writes Mr. Cadell, "it seems strange that an arrangement which for more than twenty years worked so admirably should have been set aside without any sufficient investigation."

Transfers of landed property.

Nothing gives a better idea of the progress of a district than an accurate account of the transfers of the landed property within it, the causes for these transfers, and the castes of those who have lost the land and of those who are the new proprietors. We have fairly correct materials on these points for this district, and I shall offer no apology for exhuming them from the district records. The following statements show the transfers by private sale and mortgage and by forced sale for the whole district during the currency of Mr. Thornton's settlement; the caste of those who lost the land and the caste of the purchasers, and also the area still remaining to the original proprietors. Similar returns for the succeeding ten years are given for the six parganahs of the Ganges canal tract, the assessment of which was revised by Mr. Cadell. From an interesting return,[1] drawn up by the same officer in 1874, showing the transfer of land from the agricultural to the non-agricultural classes, it appears that in 1840, out of a total area of 981,458 acres, 109,377 acres, or 11 per cent., were held by others than those subsisting on the land. In 1860 the proportion had increased to 19·5 per cent., and in 1870 to 20 per cent. I shall now endeavour to show how these changes have taken place, and first give the statistics.

Statement showing the character of the transfers of landed property in the Muzaffarnagar district from 1841 *to* 1861.

Parganah.	*Transfers by*			Percentage of these transfers to total area.	Confiscations on account of rebellion.	Percentage to total area.	Percentage of total transfers to total area.	Area exempt from transfer.	Total area in 1860.	Mr. Cadell's confiscation area.
	Private sale and mortgage.	Forced sale.	Total.							
Shámli, ..	6,786	3,531	10,317	16·0	3,189	4·75	20·75	51,944	65,450	3,204
Kairána, ...	3,833	2,397	6,230	10·7	195	0·25	11·0	51,192	57,617	130
Thána Bhawan, ...	4,015	1,675	5,690	12·6	7,536	16·9	29 5	31,705	44,931	10,957
Bidauli, ...	7,147	6,132	13,279	22 2	938	1·6	23·9	45,574	59,791	66
Jhanjhána, ...	7,257	1,821	9,078	17·2	94	...	17·2	43,317	52,489	343
Budhána, ...	3,839	1,838	5,677	11·4	3,336	6·5	17·9	40,685	49,698	3,103
Shikárpur, ...	11,418	5,067	16,485	25·8	257	0·2	26·0	47,063	63,805	200
Kándhla, ...	8,782	2,714	11,496	17·0	1,188	2·0	19·0	53,876	66,560	882
Muzaffarnagar, ...	11,021	7,335	18,356	27·0	863	1·5	28·5	41,886	61,105	421
Baghra, ...	12,395	3,869	16,264	30·1	230	0·4	30·5	38,401	54,895	113
Charthawal, ...	5,199	5,104	10,303	18·0	1,934	3 0	21·0	45,098	57,335	1,665
Púr Chhapár, ...	5.911	3,523	9,434	20·0	359	0 7	20·7	49,132	58,925	292
Gordhanpur, ...	5,087	1,555	6,642	15·3	1,702	3·2	15·5	34,919	43,263	...
Jánsath, ...	10,796	1,461	12,257	20·0	...	...	...	48,969	61,226	45
Khátauli, ...	12 297	15,657	27,954	47·0	...	...	...	31,656	59,610	975
Bhúma, ...	22,365	9,431	31,796	50·0	...	...	...	47,395	79,191	116
Bhukarheri ...	17,579	19,040	36,619	44·2	920	0·8	45·0	45,115	82,634	986
Total, ...	155,727	92,150	247,877	24·3	22,471	2·2	26·5	747,927	1,018,275	23,498

[1] I am chiefly indebted to this return and the printed and manuscript records of the settlement for the materials for this account of the transfers.

The area confiscated during the mutiny given in column 6 is taken from the manuscript parganah reports, and the area of confiscations in the last column is taken from the return made by Mr. Cadell in 1874.

To complete these statistics, the transfers from 1862 to 1870 in the upland portions of the parganahs revised by Mr. Cadell are given below :—

Parganah.	Total area.	*Transfers by*		
		Private sale, &c.	Public sale.	Total.
	Acres.	Acres.	Acres.	Acres.
Jánsath, ...	61,963	6,351	775	7,126
Púr Chhapár, ...	56,747	2,344	1,110	3,454
Muzaffarnagar, ...	69,554	4,308	1,173	5,481
Bhukarheri, ...	64,577	8,695	862	9,557
Khátauli, ...	62,393	6,430	3,813	10,243
Bhúma, ...	48,923	8,262	862	9,124
Total, ...	3,64,057	36,390	8,595	44,985

Caste of original proprietors and area in acres remaining with them exempt from transfer on the expiration of Mr. Thornton's settlement in 1861.

Parganah.	Játs.	Tagas.	Gújars.	Rajpúts.	Mahájans.	Sayyids.	Shaikhs.	Patháns.	Bilúches.	Others.	Total.
Shámli, ...	39,492	...	2,735	1,315	2,179	89	1,090	1,279	121	3,644	51,944
Kándhla, ...	20,979	6	13,922	5,866	3,912	1,210	2,456	675	...	4,850	53,876
Thána Bhawan, ...	4,028	889	...	16,672	2,433	302	2,849	239	1,506	2,787	31,705
Budhána, ...	9,079	1,409	1,451	13,439	475	18	...	4,101	...	10,713	40,685
Shikárpur, ...	25,282	8,036	...	1,655	879	34	609	4,407	...	6,161	47,063
Baghra, ...	Details not forthcoming.										
Jhanjhána, ...	17,947	...	5,440	8,481	1,563	94	2,140	3,353	1,287	3,012	43,317
Charthawal, ...	3,928	19,329	...	14,263	...	5,884	...	...	...	1,694	45,098
Kairána, ...	...	...	41,092	...	1,962	182	3,587	80	...	4,289	51,192
Gordhanpur, ...	1,511	459	30,075	...	427	...	...	...	...	2,447	34,919
Bidauli, ...	6,387	757	11,656	11,049	1,978	9,079	4.5	1,673	...	2,580	45,574
Muzaffarnagar, ...	559	4,457	1,648	410	5,647	18,260	147	12	...	10,746	41,886
Bhukarheri, ...	...	399	13,266	...	10,796	9,919	7,233	...	...	3,502	45,115
Púr Chhapár, ...	9,318	12,553	9,068	551	8,702	864	4,551	...	...	3,525	49,132
Total, ...	1,38,510	48,294	1,30,353	73,701	40,953	45,935	25,077	15,819	2,914	59,950	581,506

Caste of losers and area in acres transferred by private and forced sales between 1841 *and* 1861, *exclusive of confiscations.*

Parganah.	Játs.	Tagas.	Gújars.	Rajpúts.	Mahájans.	Sayyids.	Shaikh.	Pathán.	Bilúches.	Others.	Total.
Shámli, ...	6,821	...	141	153	288	58	277	234	1,786	559	10,317
Kándhla, ...	2,682	...	2,410	2,713	1,431	693	41	615	...	539	11,496
Thána Bhawan ...	676	...	...	2,277	284	439	657	96	881	430	5,690
Budhána, ...	1,184	660	120	1,603	223	...	...	1,139	...	748	5.677
Shikárpur, ...	9,601	711	...	373	1,624	...	129	4,008	...	39	16 485
Baghra, ...	Details	not	procur	able.	...	...	...	...	...	...	...
Jhanjhána, ...	3,102	...	1,909	457	863	110	24	1,415	682	763	9,078
Charthawal, ...	330	1,459	...	2,581	...	5,458	...	...	...	475	10,303
Kairána, ...	...	...	4,617	...	230	...	685	147	...	551	6,230
Gordhanpur, ...	...	...	4,635	...	64	...	...	265	...	1,678	6,642
Bidauli, ...	264	112	2,001	1,435	674	7,961	...	36	...	796	13,279
Muzaffarnagar ...	102	655	1,099	108	2,423	13,373	121	9	...	466	18,356
Bhukarheri, ...	717	269	...	...	3,977	30,600	1,056	...	...	...	36,619
Púr Chhapár, ...	3,988	902	1,020	128	531	1,538	571	...	...	756	9,434
Total, ...	29,467	4,768	17,952	11,828	12,062	60,230	4,156	7,991	3,349	7,800	159,606

The statistics of the caste of vendors for parganahs Jauli Jánsath, Bhúma Sambalhera, and Khátauli are given in whole villages and shares in villages. Twenty *biswas* equal one village and twenty *biswansis* equal one biswa. I omit the minor denominations, and in the following table 'B.'=*biswa* and "bis"=*biswánsi* :—

Caste.	JAULI JÁNSATH.						BHÚMA.						KHÁTAULI.					
	LOST.			RETAINED.			LOST.			RETAINED.			LOST			RETAINED.		
	Villages.	Shares.		Villages.	Shares.		Villages.	Shares.		Villages.	Shares.		Villages.	Shares.		Villages.	Shares.	
		B.	bis.		B.	bis.		B.	bis.		B.	bis		B.	bis.		B.	bis.
Sayyid, ...	2	154	19	16	459	9	3	342	...	17	315	14	19	394	9	3	156	6
Ját, ...	...	2	15	...	12	2	1	14	...	4	26	...	...	1	19	1	18	16
Bohra, ...	...	28	13	1	10	...	...	6	13	1	13	6	...	2	15	...	7	4
Mahájan, ...	...	57	22	1	10	8	...	14	18	2	12	...	...	45	4	...	109	15
Shaikh, ...	...	35	14	...	59	...	...	...	...	...	...	...	...	10	...	...	...	...
Others, ...	...	4	12	...	...	...	...	7	26	3	18	19	...	84	13	3	252	12
Total, ...	2	284	15	18	550	19	4	385	17	27	385	19	19	539	...	7	574	13

Statement showing castes of transferrees at private and forced sales between 1841 *and* 1861, *exclusive of confiscations.*

Parganah.	Bohra.	Mahájan and Khattri.	Káyath.	Ját.	Gújar.	Shaikh.	Sayyid.	Pathán and Bilúch.	Brahman.	Marhal.	Rajpút.	Other castes.	Total.
Shámli, ..	490	5 339	222	2,216	42	282	149	152	606	557	97	165	10,317
Kándhla, ...	95	6,330	150	920	307	299	215	233	630	...	1,960	357	11,496
Thána Bhawan, ...	...	3,590	7	78	...	149	22	611	188	...	999	46	5,690
Budhána, ...	54	2,068	5	493	23	51	8	487	124	...	1,236	1,136	5,677
Shikárpur, ..	389	7,678	43	3,915	...	211	5	1,245	438	1,399	624	538	16,485
Jhanjhána, ..	105	2,896	...	723	14	217	1,784	1,758	641	17	131	792	9,078
Charthawal ..	999	5,865	...	194	..	132	559	5	568	229	907	845	10,303
Kairána, ...	...	2,819	107	...	1,801	791	234	3	31	260	138	46	6,230
Gordhanpur, ...	383	1,564	...	109	2,036	925	...	...	882	250	...	463	6,642
Bídauli, ..	...	2,337	96	287	114	450	7,784	36	...	1,923	111	139	13,279
Muzaffarnagar, ..	1,335	10,433	...	516	...	3	1,420	9	44	4,146	26	424	18,356
Bhukarheri, ..	3,846	21,815	706	569	...	1,115	7,386	17	837	...	...	328	36,619
Púr Chhapár, ...	92	2,755	...	396	3,178	569	1,239	50	271	5	70	809	9,434
Total, ...	7,788	75,489	1,336	10,416	7,515	5,194	20,797	4,606	5,260	8,818	6,299	6,088	169,606

Statement showing the castes of transferrees in the three parganahs for which the records give only the number of villages and portions of villages transferred.

Caste of transferree.	*Khátauli.*			*Jauli Jánsath.*			*Bhúma Sambalhera.*			*Total.*		
	Whole village.	Bis.	Bisw.	Whole village.	Bis.	Bisw.	Whole village.	Bis.	Bisw.	Whole village.	Bis.	Bisw.
Bohra, ...	1	78	...	...	27	8	...	8	14	1	114	2
Mahájan, ...	2	242	14	...	95	19	2	243	10	4	582	3
Ját, ...	...	21	3	...	34	9	...	19	14	...	75	6
Gújar, ...	...	...	...	...	...	...	...	1	6	...	1	6
Shaikh, ...	...	13	6	...	...	...	...	...	...	...	13	6
Sayyid, ...	6	103	...	...	113	8	1	108	1	7	324	9
Pathán, ...	...	16	9	...	...	...	...	...	...	...	16	9
Brahman, ...	...	...	...	...	5	3	...	...	..	..	5	13
Marhal, ...	10	28	14	2	...	...	...	...	...	12	28	14
Rajpút, ...	...	29	9	...	...	...	...	4	...	...	33	9
Others, ...	...	6	5	...	8	8	1	...	12	1	15	5
Total, ...	19	539	...	2	234	15	4	385	17	25	1,209	12

Sayyid losses.

Up to nearly the close of the last century the Bárha Sayyids owned the greater portion of the eastern parganahs of the district, and, except in a few Pathán and Shaikh villages, were the only landlords. After the sack of Jánsath the power of the Sayyids began to

wane; many of them went into exile, and the Gújar Rajas of Landhaura and Bahsúma usurped the Sayyid villages. At the conquest the Sayyids returned, and were, in many cases, restored to possession, but, as a rule, the representatives of the families which had throughout held the highest position seem to have lost all the energy of their ancestors, and to have been distinguished mainly by the reckless extravagance which has ruined so many ancient and once powerful families in their effort to maintain a style of living to which their resources were no longer equal. In this way, the descendants of Khánjahán, the Sayyid minister of the Emperor Sháhjahán, have lost nearly all the large estates they once possessed in parganah Khátauli and much of their lands in Jánsath and Muzaffarnagar. In Khátauli only, the lesser Sayyids have, in any way, held their own. Their lands have passed into the hands of the Játs of Maulaheri, Tagas, the Marhal Nawáb of Karnál, and the Sayyids of Jánsath, and here Baniyas have not acquired much land. In the Sayyid parganah of Jánsath there have been far fewer transfers, but the Mahájan family of Talra early got a footing in the parganah, and on their decay, the lands which they had acquired fell, for the most part, into the hands of a Baniya family which had prospered under the protection of the Sayyids of Jánsath. The heads of the Jánsath families have shown more intelligence and shrewdness than their Khátauli clansmen, nor have they thought it incumbent on themselves to support the dignity of their families by the extravagance which has ruined the descendants of Khánjahán. Though Játs and Rajpúts have succeeded in acquiring a little land in this parganah, and the Nawáb of Karnál has purchased two villages, the greater part of the Sayyid losses has gone to swell the domains of the heads of the clan.

Jánsath tahsíl.

In Bhukarheri the Sayyids of Morna and Tisha have lost much, and the influence of the Landhaura Raja made this parganah an early prey to the Mahájan family which held the office of treasurer to the Raja. The lesser Sayyids, too, fell to the usurer, but since 1840 the Tisha Sayyids have begun to recover much of their property, and many villages have come into the hands of the Sambalhera Sayyids. In the lowlands of the Ganges *khádir*, where cultivation is so risky and cultivators so few and so difficult to retain, the greater portion of the area has passed out of the hands of the old proprietors to Baniyas. Here, perhaps, the money-lenders make as good landlords as any one else, for though improvement is not to be looked for from them, their own interests will prevent them from oppressing their tenants. In Bhúma Sambalhera the *khádir* was owned by many small proprietors who lived close by and managed their own lands, and, besides, this portion of the Ganges valley has not deteriorated so much as the corresponding tract to the north, so that transfers are fewer. In the uplands of Bhúma, the Sayyids of Míránpur, who rose to eminence on the ruin of their Jánsath brethren, have lost much of their possessions.

Muzaffarnagar tahsíl.

In the Muzaffarnagar tahsíl there were fewer Sayyids, and there have been, therefore, fewer extensive transfers. In parganah Muzaffarnagar the descendants of Khánjahán have gone steadily to decay, and the Nawáb of Karnál, whose ancestor held the parganah at the conquest, has purchased largely, as also has the head of the Ratheri Sayyids. Transfers have been numerous, but chiefly to the classes already owning land in the parganah. In Púr Chhapár the Landhaura treasurer bought up the not very well assured rights of the Jánsath Sayyids, who now own no land in the parganah. Some of the village communities admitted to engage for the revenue on the death of Raja Ramdayál, in 1813, early fell into the Baniyas' hands, but, since the construction of the canal, Játs and Tagas have more than held their own, and even Gújars have lost but little, whilst the loss of the ruined *khádir* towards the Soláni is little felt. In Baghra the Sayyids have lost much land to the money-lenders, whilst Ját villages have kept their own. In Charthawal, where the Morna Sayyids held large possessions, transfers have been comparatively few, notwithstanding the losses which recurring famines have caused in a very insufficiently irrigated tract. Sayyids have, however, lost most; next came Rajpúts and Tagas. Gordhanpur was originally held almost entirely by Gújar owners, and money-lenders only appeared when the western portion of the parganah, about 1857, deteriorated so suddenly and completely as to ruin the owners before the state of affairs became generally known. Gújars, however, still hold the greater part of the parganah.

Budhána tahsíl.

There have been fewer transfers in tahsíl Budhána than in any other tahsíl in the district, and in the tahsíl, fewest in the parganah in which village cultivating communities predominate. In parganah Budhána only about one-tenth of the area changed hands between 1840 and 1860, and Rajpúts, Játs, and Tagas still retain the greater part of their possessions. In Shikárpur the Játs and Patháns are the principal losers, and a few Tagas, Rajpúts, and Mahájans have lost some land. One turbulent Ját community ruined itself by murdering a Baniya intruder, and another never recovered from the punishment inflicted on it for the murder of its Baniya enemies during the mutiny. In Kándhla, the Játs, Gújars, Rajpúts, Mahájans and Musalmáns have lost seventeen per cent. of their possessions between 1841 and 1861. Altogether the old proprietors in this tahsíl have retained the greater portion of their possessions, and the alienation statements show how little even comparatively heavy assessments cause transfers when compared with reckless extravagance in the owner themselves as exhibited in the eastern parganahs of the Muzaffarnagar and Jánsath tahsíls. In the Jánsath tahsíl the alienations range from 20 per cent. of the total area in Jánsath to 50 per cent. in Bhúma, and in the Muzaffarnagar tahsíl from 15 per cent. in Gordhanpur to 30 per cent. in Baghra, whilst

in the Budhána tahsíl the percentages are 11·4 in the Budhána parganah, 17 in Kándhla, and 25·8 in Shikárpur.

Shámli tahsíl.

In the Shámli tahsíl the parganahs of Thána Bhawan and Shámli are similar in their general features although the latter is more fertile. In both parganahs the land to the east of the Karsuni is without sufficient means of irrigation, and in Thána Bhawan, especially, Government aid will always be required in seasons of drought; but to the west of the river the land is over-saturated and water-logged by excessive irrigation from the eastern Jumna canal. Thus the eastern tract requires State aid in the shape of rajbahas, whilst the western tract requires similar aid in the shape of drainage lines and the reduction of the number of existing rajbahas. In Shámli the Játs have been the principal losers, and those of *kasbah* Shámli have lost ground owing to their turbulent character, but generally the old proprietors are now keeping their own. The small Bilúch, Pathán, and Shaikh landowners have lost nearly all that they possessed, but Játs still own two-thirds of the parganah. The head of the Shaikhzádahs of Thána Bhawan rebelled during the mutiny, and his property was confiscated, but both before and after 1857 the lesser Shaikh families lost their lands. The Pathán and Bilúches, through extravagance, and still more through indulgence in the expensive luxury of litigation, have gone far to ruin themselves, and the money-lenders have obtained a larger proportion of the revenue-free than of the revenue-paying land. In Jhanjhána the same characteristics hold good with regard to Pathán, Bilúches, and indeed the whole lesser Musalmán proprietary body, and although the transfers between 1840 and 1860 amount to seventeen per cent. of the total area, Musalmáns lost more than half. The parganah is a poor one, cultivation is backward, population scanty, irrigation defective, and the management of villages no easy task. In Kairána the losses during the same period cover 10·7 per cent. of the total area, and two-thirds of them have fallen on the Gújars, and here the improved circumstances of the tract would seem to give an impulse to transfers, for the canal increasing the productiveness of the tract and making management more easy, the money-lender becomes more anxious to get the land into his own hands and less willing to leave it in the hands of his debtor. In Bidauli there is less land in the hands of the non-agricultural classes than there was thirty years ago, but this is mainly due to the light assessments which the Sayyid proprietors now enjoy. Although money-lenders held more land in the Shámli tahsíl than they held in the Budhána tahsíl prior to 1840, since then their progress has been slow, and that they have made any is entirely due to the large purchase of confiscated estates after the mutiny. "It is much to be regretted," writes Mr. Cadell, "that they were ever allowed this opportunity of enriching themselves, for, owing to skilful combination, the capitalists of the district managed about that time to obtain for most inadequate sums estates

which, if retained by Government for a few years and then sold in smaller plots, would have brought a more adequate price, while their acquisition by residents would have been more productive of good to the neighbourhood"

General results.

Transfers have been fewest where village communities owned most of the lands, and greatest where Musalmáns have been proprietors. In the early days of our rule the transfers of much Sayyid property was, doubtless, due to the rigidity of our system of collection, while in a few estates in Bhúma Sambalhera severity of assessment may have been, in some degree, the cause. In Púr Chhapár, however, the village communities, some fifty to seventy years ago, paid a higher revenue for land, then dry, than they now pay for it though water is available for nearly all the land that can utilise irrigation and though prices have so greatly risen. In Baghra, Shikárpur, Kándhla, Shámli, and Budhána many of the best villages pay less now than they paid immediately after the conquest. Of all castes, the Tagas cling most resolutely to their land, and in Púr Chhapár they have stood their ground. The inaptitude for self-government of a Ját community often mars its efficiency in keeping as well as in acquiring land, while Rajpúts and Gújars have now lost much of the security which their old character for turbulence gave them. In industrious and successful agriculture not a few Gújar communities now come near to the best in the district and pay as high rents and revenue as their neighbours, but, on the whole, they have lost more land than other castes. They are less industrious than the Játs and Tagas, and, as a rule, form an easier and safer prey than the Rajpúts. When reduced to the position of cultivators they are more tractable than the Rajpút and less sternly mindful of their real or fancied wrongs. But Muhammadans have, as a body, lost far more than any Hindu castes. Even converts to Islám are less industrious and more extravagant than their Hindu brethren, and the Sayyid, Pathán, Shaikh, and few Mughal families in the district are now, as a rule, more or less decayed. Although the converted Rajpút family of the Marhal Nawáb of Karnál and the Sayyids of Jánsath, Ratheri, Sambalhera and Jaula have bought up much land from their co-religionists, Muhammadans, all through the district, have lost ground greatly, and even where transfer statements are not against them, the tendency has been to bring the land of the small Musalmán proprietors into the hands of a few wealthy families.

Transfers not due to the pressure of the assessments.

In very few cases, however, even amongst the Musalmáns and Gújars, can the pressure of the land-revenue be justly given as the cause of these transfers. Other influences have been at work, as the intrigues of the Baniyas on the one side and the idleness and extravagance of the Sayyid, Pathán and nau-Muslim landowners, and the lazy thriftlessness of the Gújar proprietary body on the other. On this point Mr. Cadell is in accord with Messrs. Keene, Colvin, Grant, and Martin, for he

writes:—"The statement of transfers of land held free of revenue is an additional proof of the fact that transfers in this district have, for the most part, been uninfluenced by the assessments. In Khátauli, Muzaffarnagar, and Baghra, in which parganahs Sayyid *muáfis* were most extensive, transfers have been nearly as numerous as in the revenue-paying portion of the parganah, and the money-lenders have made greater way than elsewhere, notwithstanding the considerable purchases which have been made by wealthy Sayyids and by the Nawáb of Karnál. This circumstance is easily accounted for by the extreme attraction which revenue-free land presents to the petty Baniya's mind. If one may judge from the conduct of the most extensive landowners, they prefer investing their money in revenue-paying estates; for the same money they acquire proprietary rights over greatly more extensive tracts, and obtain more extended influence. But to the petty Baniya, the freedom from Government interference, the certainty that, however he may rack rent, he is beyond the reach of the assessing officer, these considerations, rather than mere security and the advantage which freedom from assessment gives in the event of improvements, which are very rarely effected, form a charm which proves so attractive to the small money-lender, and it is likely enough that permanent settlement would merely increase the desire of the money-lenders to acquire land without in any way increasing the ability of the present landlords to resist their encroachments. In Bhukarheri, Charthawal, Kándhla, and Jhanjhána, in which the extent of revenue-free land is very considerable, it is owned for the most part by Shaikh brotherhoods, and in most such communities there are generally one or two careful managers or prosperous officials, who buy up the land of their poorer brethren and keep it out of the hands of the money-lenders; and, in the last-named parganah, the encroachments have been at the expense of the Patháns. In Thána Bhawan the misconduct of the Shaikhs and the extravagance of the Patháns are both responsible for the transfers; but the statistics regarding this parganah are obviously incorrect. In Bidauli, Shaikh and Sayyid muáfidárs, as well as proprietors of revenue-paying land, have fairly stood their ground."

Baniyas as landlords.

Mr. Martin in his Baghra report writes:—"As I moved through the parganah in 1862-63, the complaints against the usurious and fraudulent practices of the Baniyas met me in every village almost that I visited, and I feel it my bounden duty to place on record my opinion that it is a most serious matter." In his remarks on parganah Kándhla, Mr. A. Colvin notices the proprietary body of that parganah as affording, in one view, a good specimen of estates under the various kinds of management. Mahájan landholders and village communities are there side by side. Taking those villages in which there were, as far as could be seen, no disturbing influences, where the inhabitants were of all classes and the

former revenue was fairly assessed, the conclusion arrived at was altogether in favour of the village communities. Their villages were full and substantial, cultivation was incessant, careful, and of the best crops. The members of the coparcenary body were, as a rule, fine, intelligent independent men, ready to give a pleasant answer, out-spoken and self-reliant. Their cattle were numerous and well cared for. Artizans of all kinds were to be found in these villages, and the general impression left was that comfort and abundance prevailed." In villages held in zamíndári tenure by owners of other castes, Mr. Colvin says that all the signs of comfort and content disappear. He writes of them :—"The site is covered by a few huts of Mális or Chamárs. The cultivation consists mainly of the poorer crops ; there is less manure and therefore less sugar-cane, cotton and maize. The cultivators are miserably poor and ignorant, without interest, self-reliance, or intelligence. All the material with which education has to deal is wanting, and all the qualities which form the basis of rational prosperity are discouraged or destroyed. Where cultivators have a right of occupancy, which, however, seldom occurs in villages owned by Mahájans, the characteristics of the village are similar to those of villages held by proprietary communities: there are the same substantial houses, the same abundance of cattle, and the same air of independence and self-reliance amongst the residents."

Method of ousting the independent classes adopted by Mahájan landholders.

The distinction is not an accidental one, and is the result of a system which is daily going on in most districts in these provinces. Mr. A. Colvin thus records his experiences :—"The method in which the original landholders are first reduced to cultivators, and finally driven away, is matter of daily experience. At different times I have had opportunities of seeing it in its different stages. If the landlord has not bought the cultivating rights, he first gets the patwári on his side. He then commences a career of suits for arrears of rent, refusing to divide the grain when ripe, and preferring to embarrass the cultivators by subsequent litigation. The cultivators, on their side, are nothing loth, and enter on the contest in the hope of dispossessing the proprietor or worrying him out of his estate. The former party never, the latter only under the prospect of ruin, wishes for compromise. Decrees and balances accrue, the cultivators are unable to meet the accumulated demands ; at last a suit for ouster is brought, and the cultivators lose their right of occupancy. From that moment the fight is over. The landlord lets out his fields to men from other villages, the old cultivators disperse, the site is abandoned, the houses fall in, the high-walled enclosures are levelled, and in a corner of the village a space is cleared for the low huts of Mális or the yards of Chamárs. The principal reason leading to the adoption of such a line of action I believe to be that the Mahájan landlord does not see in what his real interest consists. He looks for increased profits from an increased share in the produce of the land, not from

an increase in the produce itself: hence he seeks to cultivate it with men who will not haggle about their share. The independent qualities of Játs and Rajpúts are odious to him. The qualities that distinguish them are precisely those which he most dislikes. First-rate agriculture, unceasing labour, and an intelligent tenantry are not his object. He prefers indifferent tillage and submissive hands. And what in this district is done on a small scale would, if occasion offered, be re-produced on a much larger. Population is abundant and agriculture is the chief resource. Hence, in as far as the village communities or cultivators with right of occupancy were destroyed, so far would the population depend for its subsistence on the terms which the Mahájans chose to impose. But if the germs of social progress lie in the independence, the leisure, and the comfort of the mass, and to such independence, leisure, or comfort the tenure of the Mahájan is fatal, does not a system, in an agricultural society, in proportion as it extends Mahájan tenures and destroys the village communities, and the occupancy tenants, militate against the conditions of social advancement? Indeed, it is difficult to see what benefit can at present be expected from large native landholders in this part of India. They do not understand the duties of landlords. They have no enterprize or wish to improve the country and forward its social prosperity, and they would be the very last to interest themselves about the education or progress of the masses. All experience, I believe, proves, even if all *a priori* reasoning had failed to point out, that, as a rule, among an agricultural people great landlords and a flourishing community are incompatible; and most assuredly of all great landlords the least likely to belie experience would be the *sahukárs* of this district. A few large estates are in every way desirable, but what seems so objectionable is the tendency to have nothing but large estates."

Exceptions to the rule of prosperity.

In speaking of the general prosperity of the village communities, especially in Kándhla, Shámli, and Jhanjhána, only those villages fairly situated are intended, nor are those inhabited by Shaikh, Pathán, and Sayyid communities included. These villages have the form of village organisation, but not the life, and in them the characteristics of the Ját and Rajpút communities are altogether wanting though they are not worse cultivated nor more badly managed than the villages owned by absentee, money-lending proprietors. Some may object to the terms used by Mr. Colvin in describing the prosperity and intelligence of the village communities, and as he says, "many natives, chiefly Musalmáns, whom our rule has inpoverished and who lived by the plunder of these very villages, hate them for their prosperity, and, contrasting their own fallen state with the spreading villages and comfortable homes of their once defenceless subjects, are never weary of enlarging on their ignorance, stupidity, insolence, and rascality. And as these men are chiefly of the class who fill the ranks of the Government service, they continue to

inoculate with their own ideas a good many official and non-official Englishmen. But the source of native opinion should be searched, though the decaying Musalmán may be excused for flinging a last lie at the class whose prosperity depended on his destruction. How far the present form of community may be suited to a more advanced state of society is another question; but I should think that the necessary changes will be brought about without the aid of legislation. The tendency in this district is to leave no land in common, every man holding in separate possession his cultivated, barren and inhabited land. The joint responsibility remains unimpaired, but every man gets the entire fruit of his own labour; hence suits for imperfect partition have been very numerous. Outsiders are doubtless still deterred from letting their money go to the land, but, as has been said, in the present state of society here, there is a wide difference between an outsider purchasing land and expending his money upon the land."

Mr. Cadell's opinion of Baniya landholders.

In connection with the transfers of land, Mr. Cadell writes thus of the Baniya landowners:— "Justice compels me to say that in this district the Baniyas have, on the whole, shown themselves no worse than proprietors of other castes. Almost without any exception, large proprietors have done nothing for their land, and Baniyas, if they do nothing more, generally manage to settle hamlets where population is deficient. It is only the smaller Baniya landlords that have time for detailed oppression, and the worst of these are certainly bad enough; they treat their tenants as they do their debtors; their chief endeavour is to get them more and more into their hands, to reduce the occupancy tenant to the position of a tenant-at-will, and if he is then troublesome, *i. e.*, something above the cringing Chamár, to eject him from the village. But the worst petty Baniya proprietor is equalled in harshness and surpassed in courage and determination by the bad Sayyid or Pathán landlord, and except that people resent oppression on the part of a new tyrant more than they do on that of an old one, it is likely that the unprivileged and unprotected cultivator would find little to choose between the two, between the new landlord and the old, and would probably prefer the Baniya to the Pathán, or the Shaikh or Ját, if not to the Sayyid. The protected tenant, on the other hand, is safest with the old landlord, who has influence enough to obtain from the tenant the not very valuable but highly prized present of hay and straw, fuel, molasses, &c., upon which in many villages the Baniya can only count when the tenant is deprived of his rights. It is probably from the same cause, the feeling of the comparative security of their influence, that Sayyid landlords often allow to their tenants a freedom in building and in planting which the Baniya would never cheerfully yield; and on the whole, the old proprietor, if when roused he is a more violent, is a less insidious enemy than the new, and when he is on good terms with his tenants, is a more generous and kindlier friend. In most instances, indeed, the worst feature of the Baniya landlord is his conduct

in obtaining land, not after its acquisition; and when the new proprietor has swindled cultivating proprietors out of their ancestral land any terms between the two are impossible; and such villages furnish the worst instances of Baniya oppression; and it is chiefly in the interest of the poor and ignorant that Government interference is required, and can be productive of good. The reckless Sayyid knows well enough how his career of extravagance will end; the petty owner needs what protection the law can give him from fraud, and good policy demands that every obstacle should be thrown in the way of the usurer obtaining land from the class which suffers most injustice during, and the greatest oppression after, the acquisition by the money-lender of their ancestral land." The following statement gives the official record of transfers of proprietary right for fourteen years since the mutiny:—

Year.	Under orders of court.				By private transfers.				
	Sale.				*Sale.*				
	Number of cases.	Aggregate revenue of property transferred.	Number of other cases.	Total number of cases.	Number of cases.	Aggregate revenue of property transferred.	Succession, number of cases.	Mortgage, number of cases.	Total number of cases.
		Rs.				Rs.			
1860-61,...	82	1,172	28	110	233	6 620	111	220	564
1861-62,...	116	4,590	562	729	334	13,510	1,054	261	1,649
1862-63,...	67	2,047	31	98	243	7,598	100	950	1,293
1863-64,...	78	2,832	54	132	165	6,589	110	210	485
1864-65,...	66	4,474	82	148	244	8,474	81	277	602
1865-66,...	81	1,859	138	219	338	7,871	80	561	979
1866-67,...	90	2,716	158	248	308	7,561	74	670	1,052
1867-68,...	95	2,825	101	196	406	8,488	166	645	1,217
1868-69,...	139	3,427	74	213	451	8,443	69	629	1,149
1869-70,...	135	3,224	58	193	507	7,293	209	673	1,389
1870-71,...	173	4,106	64	237	504	7,050	228	429	661
1871-72,...	189	3,897	63	252	383	7,671	193	673	1,249
1872-73,...	184	3,425	93	277	357	16,160	246	498	1,101
1873-74,...	117	5,270	65	182	358	6,823	412	587	1,357

Classes of tenants and areas held by them.

The following table shows for each parganah the numbers of cultivating proprietors, tenants having a right of occupancy and tenants-at-will as ascertained in 1840 and 1860-63, with the area held by them and the average holding per head of each class. The total areas entered as held by each class in 1860 are probably accurate, but it is obvious that much of the land held without rights of occupancy must be cultivated by persons who hold other land either as cultivating proprietors or as occupancy tenants, and it is possible that not a few both of the owners and tenants have been entered twice over for land which they cultivate in different estates or in distinct capacities, but, on the whole, the returns may be considered as fairly accurate as the intricate nature of the investigation will allow. An examination of the records of the revision of settlement confirms this view and shows that not a few of the cultivating proprietors cultivate land as occupancy-tenants and as tenants-at-will in addition to their own seer, and occupancy-tenants also hold as tenants-at-will, and so far the old statistics are imperfect.

Occupancy statement for 1840 *and* 1860[1].

Class of occupiers.	Shámli.		Kándhla.		Thána Bhawan.		Budhána.		Shikárpur.		Baghra.	
	1840.	1860.	1840.	1860.	1840.	1860.	1840.	1860.	1840.	1860.	1840.	1860.
Cultivators with a right of occupancy.	20	1,779	6	2,358	170	535	550	1,588	1,030	2,668	1,310	2,447
Area held by them,	89	1,889	29	5,289	936	2,045	2,869	3,890	6,527	7,496	6,356	9,471
	A.R.P.											
Average area of each holding.	4 1 32	1 0 10	4 3 13	2 1 8	5 2 1	3 2 29	5 0 35	2 1 31	6 1 14	2 3 9	4 3 16	3 2 15
Tenants-at-will, ...	5,475	4,804	4,440	4,639	2,453	2,552	2,776	4,724	3,476	5,864	2,589	5,012
Average held by them.	13,772	14,053	17,157	17,547	11,320	14,495	10,874	13,467	13,567	15,195	12,956	12,436
	A.R.P.											
Average area of each holding.	2 2 2	2 3 29	3 3 18	3 3 12	4 2 19	4 1 3	3 3 27	2 3 16	3 3 25	2 2 15	5 0 0	2 1 37
Cultivating proprietors.	4,708	4,612	2,362	3,486	2,244	1,322	2,269	2,439	3,967	4,420	1,744	2,992
Area held bythem,	33,566	29,513	24,782	27,493	17,463	14,152	17,943	17,925	25,100	25,796	16,900	20,131
	A.R.P											
Average area of each holding.	7 0 20	6 1 27	10 1 39	7 3 13	7 3 5	10 1 31	7 3 25	7 1 31	6 1 12	5 3 14	9 3 0	6 2 23

[1] For certain villages the returns for 1840 are not forthcoming, and though the actual statistics of all the villages are given for 1860, the number of cultivators in the villages for which the 1840 papers were not procurable are not included in the averages in order to make the comparison more accurate and complete. The average holdings are given in acres, roods and poles.

Class of occupiers	Jhanjhána.		Charthawal.		Kairána.		Gordhanpur.		Bidauli.	
	1840.	1860.	1840.	1860.	1840.	1860.	1840.	1860.	1840.	1860.
Cultivators with a right of occupancy.	16	549	896	2,014	17	527	192	331	362	703
Amount of land held by them.	125	843	6,909	11,518	170	2,246	1,338	1,424	2,325	4,100
Average area of holding.	A. R. P. 7 3 10	1 1 17	7 2 34	5 2 35	10 0 0	4 1 2	6 3 35	4 1 8	6 1 28	5 3 28
Tenants-at-will, ...	2,113	2,015	9,623	3,554	2,614	2,388	1,075	1,466	1,276	1,231
Amount of land held by them.	8,924	7,742	14,892	11,210	14,945	13,220	4,886	5,482	7,448	6,366
Average of holding.	A. R. P. 4 0 36	3 2 39	1 0 17½	3 0 25	5 2 35	5 2 3	4 2 7	3 2 38	5 3 14	5 0 27
Cultivating proprietors.	1,916	2,038	1,734	2,046	1,321	1,484	603	623	713	1,026
Amount of land held by them.	19,576	16,426	18,390	21,621	15,860	1,8176	8,957	9,212	11,284	10,078
Average of holding.	A. R. P. 10 0 35	8 0 1	10 2 17	10 2 11	11 2 22	12 0 34	14 3 16	14 3 6	15 3 12	9 3 18

Class of occupiers.	Púr Chhapár.		Muzaffarnagar		Bhukarheri.		Jauli Jánsath.		Khátauli.		Bhúma Sambalhera.	
	1840.	1860.	1840	1860.	1840.	1860.	1840.	1860.	1840.	1860.	1840.	1860.
Cultivators with right of occupancy.	348	1,774	714	2,527	781	3,077	313	3,461	732	3,252	436	2,411
Amount of land held by them.	6,076	14,593	8,241	17,950	9,748	26,071	3,870	25,050	8,863	19,565	4,761	18,508
Average area of holding.	A. R. P. 17 1 28	8 0 36	11 2 7	7 0 17	12 2 0	8 2 0	2 1 18	7 1 0	12 0 17	6 0 2	8 3 21	7 2 30
Tenants-at-will,	2,710	3,180	4,121	3,322	2,491	3,398	2,791	4,051	2,724	3,162	3,162	3,102
Amount of land held by them.	10,918	11,735	25,315	15,982	25,955	14,087	37,149	17,071	22,893	12,217	24,620	14,896
Average of holding.	A. R. P. 4 0 5	3 2 30	6 0 3	14 3 10	10 1 3	4 0 35	13 1 9	4 0 30	8 1 24	3 3 18	7 3 9	4 3 1
Cultivating proprietors.	1,371	1,514	344	562	293	713	222	481	705	1,107	164	358
Amount of land held by them.	17,145	14,775	6,434	7,985	5,762	6,756	7,087	6,642	7,790	8,582	3,747	7,81[illegible]
Average of holding.	A. R. P. 12 2 1	9 3 1	18 2 32	14 0 33	19 3 0	9 1 21	31 3 28	13 3 9	11 0 8	7 3 0	22 3 30	21 3 1[illegible]

These tables give a total number of cultivating proprietors in 1840 of 3,099, holding 47,965 acres, and in 1860 of 4,735 persons holding 52,501 acres; occupancy tenants in 1840 numbered 3,327 persons and held 41,554 acres, and in 1860 they numbered 16,502 persons and held 121,737 acres; while tenants-at-will, in 1840, numbered 17,999 persons and held 146,850 acres, and in 1860 numbered 20,206 persons and held 85,988 acres.

Revision of 1871-73.

The following statement shows the details of occupancy of the six Ganges canal parganahs as recorded during the revision in 1871-73 :—

Class of cultivators.	*Púr Chhapár,*		*Muzaffarnagar.*		*Bhukarheri.*		*Khátauli.*		Jaulí Jánsath (khalisa.)	Bhúma Sambalhera (khalisa.)
	Khalisa.	Muáfí.	Khalisa.	Muáfí.	Khalisa.	Muáfí.	Khalisa.	Muáfí.		
I.—PROPRIETORS.										
Number of persons, ...	1,650	71	936	47	576	20	831	68	360	276
Area held as seer, ...	17,617	497	8,596	1,104	7,013	103	8,483	718	6,870	5,656
	A. R. P.									
Average area of holding,...	10 2 8	6 25 0	9 0 29	23 1 38	12 0 28	5 24	10 0 33	60 2 9	17 2 31	20 1 39
Area held as occupancy tenants.	706	32	426	152	317	...	80	...	156	140
Number of persons, ...	198	6	73	21	68	...	53	..	55	8
	A. R. P.									
Average holding as such,...	3 2 11	5 1 13	5 3 13	7 38 0	5 0 5	...	1 2 1	...	2 3 14	17 2 0
Area held as tenants-at-will.	812	...	487	115	154	7	229	80	247	164
Number of persons, ...	263	...	128	18	54	1	101	23	62	26
	A. R. P.									
Average holding as such,...	3 0 14	...	3 3 10	6 1 22	2 3 16	7	2 1 3	3 1 35	3 3 37	6 1 9
Total holdings, ...	19,135	469	9,509	1,371	7,484	110	8,792	798	6,773	5,960
	A. R. P.									
Average holding, ...	11 2 16	6 2 17	10 0 25	29 0 27	12 3 39	5 2	10 2 13	11 2 38	18 3 10	21 2 15
II.—OCCUPANCY TENANTS.										
Number of persons, ...	1,438	6	2,706	137	1,741	1	2,420	11	2,473	1,647
Area held by them, ...	13,641	50	21,137	1,357	26,750	3	20,512	291	27,983	19,455
	A. R. P.									
Average holding, ...	9 1 38	8 1 13	7 3 10	9 3 25	15 1 18	3	8 0 26	26 1 32	11 1 10	11 3 10
Area held by them as tenants-at-will.	2,303	...	4,261	391	',949	...	2,199	247	6,430	2,817
Number of persons, ...	400	...	776	59	306	...	431	26	623	471
	A. R. P.									
Average holding as such,	5 3 1	...	5 2 0	6 2 20	6 1 19	...	5 0 16	9 2 0	10 1 11	5 3 37
Total holding, ...	15,944	50	25,398	1,748	28,699	3	22,711	538	34,413	22,272
	A. R. P.									
Average holding, ...	11 0 14	8 1 13	9 1 2	12 3 1	16 1 37	3	9 1 22	48 3 25	13 3 26	13 2 4
III.—TENANTS-AT-WILL.										
Number of persons, ...	936	1	1,616	211	1,189	85	1,312	154	878	747
Area held by them, ...	7,350	2	11,691	2,491	10,088	429	10,718	849	9,205	3,367
	A. R. P.									
Average holding, ...	7 3 16	2	7 0 16	11 3 9	8 1 31	5 7	8 0 27	5 2 2	10 1 37	11 0 32

In 1841 there were 2,613 occupancy tenants, holding 33,485 acres in this tract; in the revenue-paying area their number increased to 12,425, holding 131,303 acres, in 1873: in 1841 cultivating proprietors numbered 2,755 souls, holding 41,531 acres; and in 1873 there were 4,629, holding 53,735 acres. Tenants-at-will have fallen from 13,878, holding 121,465 acres in 1841 to 6,708, holding 79,471 acres in 1873, a remarkable commentary on the operation of Act X. of 1859.

Plough-lands.

In several parganahs the census of ploughs and plough-cattle gives about 25 acres per plough and six acres per bullock, but in an ordinary second-class estate with less than the general average of sand and possessing flush irrigation from the canal a holding of fifteen acres is considered enough for one fully-equipped plough. The area belonging to each plough varies with the character of the soil and the facilities for irrigation. The enormous area of sand and the careless cultivation which prevails in sandy tracts increase the plough area. Thus in Jánsath a plough covers 16 acres of good land and 9 acres of bad land, whilst in the neighbouring parganah of Khátauli the average plough area is 14½ acres of good land and 5 acres of bad. Many estimates have been made of the average area of holdings and the profits derived from them. In this district the Deputy Collector for settlement thinks that 150 *pukka* bíghas, or 75 acres, with four 4-bullock ploughs, would be considered a large holding; 60 *pukka* bíghas, or 30 acres, would be a middling-sized holding, and 25 *pukka* bíghas, or 12½ acres, would be a small holding. All such generalizations, however, must be purely hypothetical as the quality of the soil and the character of the crop are two important elements which must vary in almost every case. If the soil were rich and good, then 20 acres of land would be considered a large farm for a single cultivator. Mr. Williams thinks that, generally speaking, 20 acres, or 40 *pukka* bíghas, would be considered a large holding, and anything under ten acres a small one. This calculation comes nearer to the estimates made by the tahsíldárs than that of the Deputy Collector. The tahsíli estimates give 100 to 150 *kuchcha* bíghas (three *kuchcha* bíghas are equal to one *pukka* bígha) with four ploughs as a large holding, 70 to 75 *kuchcha* bíghas with two ploughs as a middling holding, and 30 to 50 *kuchcha* bíghas with one plough as a small holding. Mr. Williams writes:—"The minimum probably applies to the majority of cultivators, and where we get to holdings of 150 *kuchcha* bíghas and upwards sub-tenants are almost always in possession. The Settlement Deputy Collector is of opinion that not more than 33 *pukka* bíghas, or about 100 *kuchcha* bíghas, say from 12½ to 15 acres, can be kept under cultivation by one 4-bullock plough in the year. Everything here depends on the diligence of the cultivator, the nature of the soil and the number and quality of the cattle. The extent of land cultivable by a single plough with a pair of ordinary bullocks is probably never more than 50 *kuchcha* bíghas. A couple of good bullocks, worth Rs. 100 the pair, might however possibly get over 70 or 75 bíghas, if not more. Double the number, and the work done will be proportionately greater, if the cultivator is diligent. Two pairs of bullocks are generally driven in one plough. The Deputy's calculation about the profits derivable from a holding of five acres are of a most discouraging nature and

Outturn of a five-acre holding.

afford a dismal prospect to the speculator: outturn for average good land irrigated only Rs. 8 per month; if unirrigated, Rs. 6, and if *bhúr* or sandy soil, Rs. 4.

"He stigmatises an estimate of Rs. 12-8-0 a month as being utterly untrustworthy. We therefore see that the annual value of the outturn would be, under the most favourable circumstances, only Rs. 96 a year, or, say, Rs. 100 in round numbers. From this deduct Rs. 32 for rent to the zamíndár, Rs. 10 for canal water, and Rs. 32 for the expenses of cultivation,[1] and only Rs. 22, or at the outside Rs. 26, profit will be left for the unfortunate cultivator. My own personal enquiries tend to confirm the conclusion that such a holding would under no circumstances yield the cultivator Rs. 8 a month. The various estimates before me range from Rs. 2 to Rs. 3, and there can be little doubt that it would take five acres of remarkably good land indeed to support a family. An income of Rs. 48 a year or the equivalent in kind is generally considered to justify a man in attempting to rear a family, but it is impossible to understand how his offspring can possibly survive the experiment, unless their means of subsistence be eked out by something else besides agriculture. There can be little doubt that the solution of the difficulty is to be found in our criminal statistics." The average holding throughout the Ganges canal tract is a little over eleven acres, with an average rental of Rs. 36-7-9, giving an average rent-rate of Rs. 3-4-5 per acre.

Rents.

Rents in this district may be divided into three classes: *zabti*, *batái*, and *tashkhís*. The first is where cash is paid for certain crops at rates varying according to the kind of crops. Thus sugar, cotton, maize and *chari* or fodder are called *zabti* crops, and yielded in 1860 a rent averaging Rs. 17, Rs. 8½, Rs. 4 and Rs. 3 per acre respectively, but since then these rents, like those of all other lands, have risen considerably. In 1841 the average *zabti* rates per acre for the whole district were sugar-cane, Rs. 14-7; cotton, Rs. 6-6-5; *chari* or fodder, Rs. 2-6-0, and maize, Rs. 3-3-6. *Batái* is where the rent is taken in kind by actual division of the produce: where an appraisement of the value is made it is termed *kunkút*. The landowner's share of the produce is usually two-fifths, though in bad villages it falls as low as one-third, and in some instances as much as one-half is taken. These rates are also called *nijkári* rates and prevail to a great extent in *bháyachára* villages, and, indeed, as will be seen, throughout the district generally. *Tashkhís* or *sarásari* is where the land, whether surplus or not, is let out to cultivators, often belonging to other villages, at so much per bígha, irrespective of the crop sown, but divided into irrigated and dry. Six of the local *kuchcha* bíghas or two *pukka* bíghas are equivalent to an acre, and the rent varies from

[1] The stock-in-trade represented by one plough has been given on a previous page, and implies a capital of Rs. 95 to Rs. 124.

three rupees to twelve annas per acre. Another class of rents is known as '*bilmukta*' where a lump sum in money or a fixed quantity of grain is given for so many fields without any specification of area. All these rents vary with the character of the soil and the cultivators.

The following statement shows the number of estates or villages paying rent in cash and the number paying rent in kind in 1860-61:—

	Shámli.	Kándhla.	Thána Bhawan.	Budhána.	Shikárpur.	Baghra.	Jhanjhána.	Charthawal.	Kairána.
Number of estates, ...	77	76	61	44	62	75	62	66	57
Change to cash rents from kind, ...	...	...	3	...	1	4	...	...	...
Whole villages where cash rents previously prevailed, ...	...	21	2	2	1	4	2	3	9
In which both kinds of rent are tolerably equal,...	64	47	40	38	55	52	40	40	38
In which rent in kind prevails, ...	6	7	16	4	5	15	18	23	10
Cultivators paying in kind,	3,833	3,521	2,565	2,920	5,708	4,703	1,467	3,949	1,238
Cultivators paying in cash,	2,305	2,296	495	3,351	2,684	1,652	1,082	1,476	1,418

	Gordhanpur.	Bidauli.	Muzaffarnagar.	Pár Chhapár.	Khátauli.	Jánsath.	Bhúma.	Bhuarkhei	Total.
Number of estates, ...	69	55	62	60	82	63	82	70	543
Change to cash rents from kind, ...	...	1	2	1	8	15	12	17	56
Whole villages where cash rents previously prevailed, ...	...	...	11	12	22	6		5	63
In which both kinds of rent are tolerably equal, ...	25	24	33	35	52	34	55	27	285
In which rent in kind prevails, ...	37	28	16	9	...	8	8	20	126
Cultivators paying in kind,...	1,604	1,455	2,918	2,277	3,056	3,230	3,253	2,778	20,571
Cultivators paying in cash,...	193	406	1,624	1,891	1,404	2,199	867	2,063	10,647

From the above statement it will be seen that in 1860-61, 20,571 cultivators paid rent in kind against 10,647 cultivators paying rent in cash.[1] Taking cash rents as a whole, they vary from Rs. 6-12-0 to Rs. 3-12-0 per acre for irrigated land and from Rs. 2-10-0 to Re. 1-2-0 per acre for dry land. *Zabti* and *nijkári* rates are still very popular with landowners, and a struggle is always going on to continue these rates. *Bilmukta* rates are usually light and are allowed to favoured tenants, such as the junior branches and relatives of the landowner's family. Writing in 1867, the Collector remarks on the stationary character of *zabti* rates, which for sugar-cane still ruled from Rs. 15 to Rs. 18 per acre, and for cotton the same as in 1841, so that the increased value of cotton during the American war must have gone into the pockets of the cultivators. In 1825, Mr. Cavendish gives the average money-rates per *pukka* bígha for sugar-cane as Rs. 6 to Rs. 7-8; for cotton, Rs. 3 to Rs. 3-12; for *chari*, Re. 1 to Rs. 1-6; for *bájra* and gram, Re. 1-2 to Re. 1-8; for *sánwak*, nine to twelve annas, and for barley, twelve to fifteen annas. Here, as now in Bundelkhand, persons cultivating in villages other than their own *(pahikásht)* had better terms there than in their own villages, and paid only from one-fifth to one-fourth of the produce, while in their own villages they paid from two-fifths to one-half.

Rent-rates in Ganges canal tract.

The following statement shows the average rents per acre paid by resident and non-resident cultivators of each class in the revenue-paying portion of the six Ganges canal parganahs at the time of revision of settlement in 1871-72. The statistics for the revenue-free area are omitted since they relate to a small area (8,858 cultivated acres), and are subject to influences not usually affecting the ordinary revenue-paying estates:—

Class of cultivator.	*Púr Chhapár.*		*Muzaffarnagar.*		*Bhukarheri.*	
	Resident.	Absentee.	Resident.	Absentee.	Resident.	Absentee.
I.—Proprietary cultivators.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p
(1) As seer, ...	3 11 6	2 13 7	3 2 11	2 6 8	3 3 3	1 2 10
(2) As occupancy tenants, ...	3 10 4	5 7 7	2 7 0	3 5 0	3 12 9	5 0 0
(3) As tenants-at-will, ...	3 4 8	2 3 11	2 14 6	6 6 1	2 15 10	...
II.—Occupancy tenants.						
(1) As occupancy tenants, ...	3 0 5	2 13 9	4 2 3	4 2 3	3 4 0	3 1 9
(2) As tenants-at-will, ...	2 10 7	2 7 7	2 0 6	3 9 3	2 11 1	3 2 1
III.—Tenants at-will, ...	3 3 8	2 0 5	2 15 11	2 12 1	2 13 4	3 2 1
Average, ...	3 5 10	2 7 8	3 8 1	3 2 9	3 2 5	2 15 7

[1] The total number of tenants in 1860, given elsewhere, is 36,708, and the above table accounts for only 31,218; I understand the difference, or 5,490 represents the number who pay partly in cash and partly in kind.

Class of cultivator.	*Jauli Jánsath.*		*Khátauli.*		*Bhúma Sambalhera.*		*General average.*	
	Resident.	Absentee.	Resident.	Absentee.	Resident.	Absentee.	Resident.	Absentee.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
I.—Proprietary cultivators.								
(1) As seer, ...	1 6 8	...	3 14 4	2 12 4	1 10 11	2 5 9	3 1 6	2 7 6
(2) As occupancy tenants.	2 12 1	...	5 4 5	...	3 11 11	1 8 10	3 6 2	2 12 0
(3) As tenants-at-will.	4 4 3	...	3 1 6	1 11 5	3 0 2	1 15 1	3 4 4	2 10 6
II.—Occupancy tenants.								
(1) As occupancy tenants.	3 13 4	3 10 11	4 12 0	4 4 10	2 12 9	2 3 8	3 10 11	3 6 3
(2) As tenants-at-will.	2 15 7	3 5 6	4 4 1	4 6 10	2 12 3	2 14 3	2 13 5	3 4 8
III.—Tenants-at-will.	2 15 2	2 5 6	3 13 11	3 10 5	1 9 10	2 3 3	2 11 7	2 10 5
Average, ...	3 2 7	3 2 4	4 5 4	3 13 1	2 6 5	2 6 0	3 5 8	2 15 5

Taking the entire revenue-paying area of the six parganahs, proprietors cultivate 57,653 acres, giving an average rent calculated on all classes of soil of Rs. 3-1-9 per acre for their home cultivation (49,696 acres) and of Rs. 2-7-8 per acre for their *pahi* cultivation. As a rule, Sayyids pay the lowest rents, next come the Rajpúts, and the Játs pay the highest. We next come to the distribution of the produce of the soil between the cultivators, the landowners, and Government.

Produce tables.

Mr. Thornton, in his report on the assessment under Regulation IX. of 1833, gives calculations showing the amount of produce from each crop per acre, and considering the large area from which his data were collected and the care with which the tables were compiled, the results of his inquiries are deserving of attention. He examined the village papers relating to division of crops of villages comprising 413,650 acres for the years 1827 to 1841, and the average produce found for each crop is noted below. The ser employed is that of 90 cross-milled Farukhabad rupees, the maximum weight of which, by Regulation III. of 1806, was 173 grains troy, and the minimum weight was 171·198 grains troy, but for all practical purposes a mean of 172 grains will be nearest the truth.

Produce per acre.	Rice.	*Jodr.*	*Bájra.*	*Urd.*	*Sáwah.*	*Moth.*	Fine rice.	Wheat.	Gram.	Barley.	*Mixed grains.* Wheat and barley.	*Mixed grains.* Wheat and gram.
In maunds and sers.	6·0	4·30½	4·0½	3·17	3·19½	2·37¾	7·4½	7· 15½	5·7	6·34½	3·18¾	5·32
In lbs. avods.	531·29	421·27	354·93	302·96	307·94	260·43	628·59	652·92	457·76	606·48	305·72	514·15½
Value in rupees per acre.	4 12 0	4 5 0	3 11 9	3 12 3	1 14 6	2 14 9	6 12 3	7 15 9	4 14 6	5 1 0	3 0 6	5 8 0

Distribution of *zabti* crops in 1841.

In estimating the value of *zabti* crops it is usual to deduct that portion of the field where the crop has failed, and from an examination of the papers relating to 20,247 bíghas of *zabti* cultivation the average was found to be three biswas per bígha. In estimating the whole produce of these crops Mr. Thornton preserved the proportion borne in kind rates by rent to the whole produce, and multiplied the *zabti* rate by four to find the value of the produce. Thus, for sugar-cane, which paid an average rent of Rs. 14-7-0 per acre, the value of the produce was Rs. 57-12-0, or deducting the recognized loss, Rs. 48-1-4, and of the rental Rs. 9 per acre went as revenue to Government under the assessments then in force. The cultivator's share in this crop is abnormally high, as he has to give more labour and money to it than to other crops, and it occupies the land over one year. The produce rate per acre for cotton was Rs. 25-8-8, or deducting loss, Rs. 21-13-0, of which Rs. 6-6-5 went as rent, and of this Rs. 4 fell to Government. Similarly in the case of *chari* or fodder the produce value was Rs. 9-8-0 per acre, or deducting loss, Rs. 8-10-9, of which Rs. 2-6-0 went as rent, and of this Re. 1-8-0 fell to Government. Where rent was paid in kind, Mr. Thornton, after ascertaining the whole produce and deducting one-tenth for cutting and cleaning the crop, estimated that the proprietor took from each maund (40 sers) of grain grown in *mísan* soil, 18 sers; in *rausli* soil 17¼ sers; in *dákar* soil 17 sers; in *bhúr* soil 15¾ sers, and in *dánda* or high and poor *bhúr* soil 14 sers. The general opinion at the settlement in 1860-61 was that the landowner received only from one-third to two-fifths of the gross produce, and, theoretically, Government takes half of this exclusive of cesses. Mr. S. N. Martin recorded his opinion that, in 1862, the value of an acre of sugar-cane was Rs. 60 to Rs. 70, and in some few cases as high as Rs. 100; that Rs. 15 were paid as rent, and of this one-half went to Government. After deducting expenses of cultivation and water-rate the cultivator's share was not more than Rs. 30.

Sayyid Husain Khán's estimate.

The following statement gives an estimate of the outturn per acre in first-class or most productive estates, in second-class or middling estates, and in third-class or indifferent estates, made by Sayyid Husain Ali Khán, a large landed proprietor in Jánsath :—

Crop.	Class of estate	*Outturn per acre.*			*Share of produce.*		
		Quantity.	Bazar value per rupee in sers.	Total value.	Cultivator's.	Landowner's.	Government.
		M. S.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Sugar-cane, ...	1	24 0	16	60 0 0	45 0 0	7 8 0	7 8 0
	2	11 8	16	48 0 0	36 0 0	7 0 0	6 0 0
	3	14 1	16	36 0 0	27 0 0	4 8 0	4 8 0
Cotton, ...	1	6 30	10	27 0 0	20 4 0	3 6 0	3 6 0
	2	...	...	...	...	...	...
	3	...	...	...	...	...	...
Jodr, ...	1	5 36	30	7 14 0	4 6 0	1 12 0	1 12 0
	2	4 36	30	6 9 0	3 15 0	1 5 0	1 5 0
	3	4 10	30	5 10 0	3 12 0	0 15 0	0 15 0
Maize, ...	1	10 5	30	13 8 0	7 8 0	3 0 0	3 0 0
	2	9 34	30	13 2 0	7 14 0	2 10 0	2 10 0
	3	8 18	30	11 4 0	7 8 0	1 14 0	1 14 0
Bájra, ...	1	6 0	28	8 9 0	4 13 0	1 14 0	1 14 0
	2	5 12	28½	7 8 0	4 8 0	1 8 0	1 8 0
	3	4 30	28¼	6 12 0	4 8 0	1 2 0	1 2 0
Coarse rice, ...	1	10 0	40	10 0 0	5 8 0	2 4 0	2 4 0
	2	9 10	40	9 4 0	5 8 0	1 14 0	1 14 0
	3	9 0	40	9 0 0	5 0 0	1 8 0	1 8 0
Wheat, ...	1	5 10	25	8 7 0	4 11 0	1 14 0	1 14 0
	2	4 28	25	7 8 0	4 8 0	1 8 0	1 8 0
	3	4 10	25	6 12 0	4 8 0	1 2 0	1 2 0
Gram, ...	1	4 30	25	7 10 0	4 4 0	1 11 0	1 11 0
	2	4 28	25	7 8 0	4 8 0	1 8 0	1 8 0
	3	4 10	25	6 12 0	4 8 0	1 2 0	1 2 0
Barley, ...	1	6 30	40	6 12 0	3 12 0	1 8 0	1 8 0
	2	6 22½	40	6 9 0	3 15 0	1 5 0	1 5 0
	3	5 22	40	5 10 0	3 12 0	0 15 0	0 15 0

Other estimates.

A similar estimate was made by Lála Ude Rám, a large banker and landowner of Muzaffarnagar, from the accounts of his own estates, and also by Mr. S. N. Martin from returns

furnished by the tahsíldárs and patwáris; as a specimen of the latter the average result for tahsíl Budhána is given below:—

Crop.	Ude Ram's Estimate.						Patwári's Estimate for Tahsíl Budhána.				
	Out-turn per acre.			*Share of produce.*					*Share of produce.*		
	Quantity.	Rate per maund.	Total value.	Cultivator's.	Landowner's.	Government.	Quantity.	Value.	Cultivator's.	Landowner's.	Government.
	M. S.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	M. S.	Rs. a.	Rs. a.	Rs. a.	Rs. a.
Sugar-cane, ...	24 0	3 0	72 0	54 0	9 0	9 0	20 8	44 14	22 8	11 3	11 3
Cotton, ...	2 0	10 0	20 0	13 4	3 6	3 6	4 16	25 2	12 8	6 5	6 5
Jodr, ...	12 0	1 4	15 0	9 0	3 0	3 0	3 24	5 11	2 15	1 6	1 6
Maize, ...	12 0	1 0	12 0	7 8	2 4	2 4	5 27	7 13	4 1	1 14	1 14
Coarse rice, ...	12 0	1 0	12 0	7 4	2 6	2 6	8 18	10 4	3 2	1 9	1 9
Wheat, ...	12 0	1 4	15 0	9 0	3 0	3 0	7 34	13 10	6 14	3 6	3 6
Gram, ...	9 0	1 4	11 4	6 12	2 4	2 4	6 32	10 0	5 0	2 8	2 8
Barley, ...	12 0	0 14	10 8	6 4	2 2	2 2	8 22	10 6	5 4	2 9	2 9

Results for 1272 and 1273 *fasli*.

Taking the whole district, the result of Mr. Martin's examination of the papers of the patwáris for 1272 *fasli* (1864-65) gave a gross produce value amounting to Rs. 62,89,067, of which the cultivators retained Rs. 40,47,262 and the landowners received Rs. 9,70,981, while Government obtained for revenue and cesses Rs. 12,70,824. These figures refer to a total of area of 1,054,065 acres, of which 650,173 acres were cultivated. The average rate of produce per cultivated acre was Rs. 9-10-9, and the average income of each recorded cultivator (99,019 persons) was Rs. 50-10-10. On the whole it would appear that from one-half to three-fifths of the produce is retained by the cultivator, whilst Government gets somewhat more than one-half of the residue, and this agrees pretty well with Mr. Martin's estimate of 60 per cent. of the total produce as the cultivator's share. Similar inquiries were instituted with greater care and more attempts at accuracy in the following year, when the value of the produce of the district was found to be Rs. 63,01,897, of which the cultivator's share amounted to Rs. 39,05,783, or 62 per cent.; the landowner's share was Rs. 11,12,189, or 18 per cent., and the Government share, including cesses, was Rs. 12,83,925, or 20 per cent. These figures are also borne out by the results of an examination made by Mr. Leeds during the same year into the profits of three fair villages: Tissa and Bhúpa in parganah Bhukarheri and Naula in parganah Khátauli. In Tissa the cultivator received 69·6 per cent. of the total produce, the landowner, 13·8 per cent., and Government the remainder. In Bhúpa the figures

were, cultivators, 76·5; landowner, 10·8; and Government, 12·5, with an absentee proprietary and a Ját, Saini, and Taga cultivating body. In the *bháyachára* village of Naula, with a resident Taga proprietary body, the cultivators received only 52·5 per cent., the landowners 23·6 per cent., and Government 23·8 per cent. Increased population and improved means of communication have kept up prices, and though a much larger quantity of grain is produced, it is chiefly exported, and for a long time to come the cultivators must continue to enjoy the present high prices and large share of the profits.[1]

Condition of the agricultural population.

The agricultural population, as a rule, are in a flourishing condition and are improving year by year. The industrious Ját communities are especially well-to-do, and no longer in debt, they are able to lay by money by which to add to their possessions. The only portion of the community for which there seems no hope is the great class comprising the old Muhammadan proprietary body: these are surely, if slowly, sinking in importance; their estates are overmortgaged and must sooner or later come to public sale. Year by year portions of these estates come to the hammer on account of debts of long standing, and no amount of loans or advances can retrieve them. From a calculation made in 1864-65, it would appear that the average income of each male cultivator was Rs. 50-10-10, and that they then numbered 99,019 souls.

Price of land.

The statement given below shows the prices per acre obtained at private and forced sales for the whole district from 1841 to 1861, and for the six parganahs revised by Mr. Cadell, for from 1842 to 1870. It will be seen from the latter statements that the price of land has materially risen since the mutiny. The variations in price between 1841 and 1861 in the different parganahs are very remarkable, ranging as they do from over Rs. 25 per acre in Shámli to Re. 0-15-0 per acre in Gordhanpur in the case of private sales and mortgage. The general average for the whole district in this class of transfers for the same period is Rs. 7-14-6, or taking the Ganges canal tract alone, is Rs. 6-11-5 per acre on 56,749 acres. Between 1862 and 1870 the price per acre had risen in the Ganges canal tract to Rs. 15-13-5, or by 136 per cent. The rise in the case of forced sales is quite as marked, being from Rs. 6-12-4 per acre to Rs. 15-14-9 per acre, and varying but little from the prices agreed upon at private sales and mortgages. I have no data for the remainder of the district subsequent to 1861, but the general opinion is that there has been a rise in the price of land all through the district, which, though not so great as that shown to have taken place in the

[1] In 1825 Mr. Cavendish records the local estimate of the division of produce in this district as follows: from lumberdárs, one-third of sugar-cane, two-fifths of other produce, and twelve annas per bígha for *chari* went to Government as revenue; from sharers and ordinary cultivators the proportions were two-fifths and one-half, *chari* paying Re. 1-2 per *pukka* bígha.

parganahs of the Ganges canal tract, is sufficiently marked to show that generally the district has participated in the general rise in rent, prices, and the value of land which has taken place all through these provinces since the drought of 1860-61.

Statement showing the revenue, price, and price per acre of the areas transferred regarding which information has been collected from 1841 *to* 1870.

Parganah.	Transfers by								Total area transferred.	Average price per acre.
	Private sale and mortgage.				*Public sale by civil court.*					
	Area.	Revenue	Price.	Price per acre.	Area.	Revenue.	Price.	Price per acre.		
1841-1861.	Acres.	Rs.	Rs.	Rs. a. p.	Acres.	Rs.	Rs.	Rs. a. p.	Acres.	s. a. p.
Shámli, ...	6,786	15,699	1,75,073	25 12 9	3,531	6,977	44,915	12 11 6	10,317	21 4 1
Kándhla, ...	8,782	13,381	1,63,285	18 9 5	2,714	4,313	23,431	8 1 0	11,496	16 3 0
Thána Bhawan,	4,015	6,300	44,780	11 2 5	1,675	2,262	13,735	8 3 2	5,690	10 4 6
Budhána. ...	3,839	7,398	54,890	14 8 1	1,838	3,037	17,248	9 6 2	5 677	12 11 3
Shikárpur, ...	11,418	18,383	1,07,865	9 7 1	5 067	7,461	25,285	4 15 9	16,485	8 1 2
Baghra, ...	12,395	15,865	35,262	2 13 6	3.869	5,879	19,602	4 13 0	16,264	3 5 4
Jhanjhána, ...	7.257	11,018	59,763	8 3 9	1,821	2,624	7,626	4 3 0	9,078	7 6 9
Charthawal, ...	5,199	8,422	25,839	4 15 6	5,104	7,439	22,133	4 5 4	10,303	4 10 5
Kairána, ...	3,833	4,638	34,723	9 0 11	2,397	2,527	15,906	6 1 2	6,230	8 2 0
Gordhanpur, ...	5,087	1477	4,781	0 15 0	1.555	1,073	6,970	4 7 11	6,642	1 12 9
Bidauli, ...	7,147	6,324	8,721	1 3 6	6,132	4,048	6,077	0 15 10	13,279	1 1 3
Muzaffarnagar,	11,021	4,868	1,21,580	11 0 3	7,335	5,683	53,199	7 4 1	18,356	9 8 2
Khátauli, ...	12,297	14,535	1,32,798	10 12 9	15,657	22,742	1,89 735	12 1 11	27,954	11 8 7
Bhukarheri, ...	17,579	13,010	67,528	3 13 5	19,040	11,516	58 364	3 1 1	36,619	3 6 8
Púr Chhapár, ...	5,911	4,810	41,396	7 0 1	3,523	5,965	28 888	8 3 2	9,434	7 7 3
Jánsath, ...	10,796	10,691	75,885	7 0 6	1,461	1,9 4	17,375	11 14 3	12,257	7 9 9
Bhúma, ...	22.365	8,834	98,019	4 6 1	9,431	4,017	34,575	3 10 8	31,796	4 2 9
Total, ...	155,727	1,65,653	12,31,988	7 14 6	92,150	98,767	5,84,464	6 5 6	247,877	7 2 0
1862-70										
Púr Chhapár, ...	2,344	3,183	27,795	11 13 9	1,110	1,578	12,157	10 15 3	3,454	11 9 1
Muzaffarnagar,	4,308	5,845	86,492	20 1 3	1,173	1,444	14,8 7	12 9 11	5,481	18 7 9
Bhukarheri, ...	8,695	6,657	1,15,792	13 5 1	862	974	20,745	24 1 1	9,557	14 4 7
Jánsath, ...	6,351	7,231	1,10,159	17 5 6	775	714	7,468	9 10 2	7,126	16 8 1
Khátauli, ...	6,430	7,482	1,79,469	27 14 7	3,813	5,299	71,002	18 9 11	10,243	24 7 3
Bhúma,[1] ...	8,262	4,983	56,732	6 3 10	862	744	10,682	12 6 3	9,124	7 6 1
Total from 1862-70.	36,390	35,381	5,76,439	15 13 5	8,595	10,753	1,36,861	15 14 9	44,985	15 13 2
Total from 1841 to 1861 of same six parganahs.	79,969	56,447	5,37,006	6 11 5	56,447	51,127	3,82,136	6 12 4	136,416	6 11 10
Total of same, 1841 to 1870.	116,359	91,828	1,113,445	9 9 1	65,042	61,880	5,18,997	7 15 8	181.401	9 0 0
Khádir, 1862-70.										
Bhukarheri, ...	2,952	557	6,870	2 5 3	...	...	...	...	2,952	2 5 3
Bhúma, ...	3,783	1,189	17,229	4 9 10	32	...	152	4 9 0	3,765	4 9 9
Púr Chhapár. ...	71	2	150	2 1 10	...	...	...	...	71	2 1 10

[1]These transfer statements of Púr Chhapár, Bhukarheri, and Bhúma Sambalhera for 1862-70 do not include the *khádir* or valley land which is separately given below.

Prices.

There are fair materials in existence for judging the rise in prices in this district. Mr. Thornton, in 1841, gave a statement showing the average price of the principal food crops over the entire district during the previous twenty years. He writes that the ser used by him "weighed 90 cross-milled Farukhabad rupees, the maximum weight of which is declared by Regulation III. of 1806 to be 173 grains troy and the minimum weight is 171·198 grains troy." This standard would be more correctly expressed as the Lucknow sikka rupee of the 45th *san* struck in the mint at Farukhabad and established by Regulations XLV. of 1803 and XI. of 1805. The standard adopted by the compiler of the market-rates in Shámli and Muzaffarnagar was 88 Government rupees or 92 old Farukhabad rupees to the ser. The following table exhibits the results both as originally recorded and converted into sers of 80 tolas of 180 troy grains each, the present standard:—

Grain.	*Mr. Thornton*,[1] 1821-1840, *whole district.*		*Mr. A. Colvin in Shámli*, 1840-41 *to* 1863-64.[2]		*Mr. Martin for Muzaffarnagar*, 1849-50 *to* 1863-64.		*Khátauli by Mr. Cadell in sers of 80 tolas of 180 grains troy.*	
	Sers of 90 tolas each, say 172 grains troy.	Sers of 80 tolas each 180 grains.	Sers of 88 tolas of 180 grains each.	Sers of 80 tolas of 180 grains.	Sers of 88 tolas of 180 grains each.	Sers of 80 tolas of 180 grains.	1840-41 *to* 1869-70.	1850-51 *to* 1869-70.
Wheat, ...	36¾	39½	31	34	29⅜	32	29¼	27
Gram, ...	42¼	45⅜	36	39½	34½	38	31⅝	30⅜
Barley, ...	54¼	58¼	45⅛	49½	48⅛	52¾	41½	40½
Coarse rice (unhusked).	51½	55	40⅛	44½	39½	43⅜	39	38
Fine rice (unhusked).	42	45⅛	35	38½	...	...	32¾	31½
Múng, ...	31	33½	31	34	29	32	...	...
Jowár, ...	44½	47½	35½	38½	34	37¼	30¾	29
Bájra, ...	43	46½	34¾	38¼	35⅜	39½	...	...
Moth, ...	40½	43½	34⅜	38½	...	...	...	...
Urd, ...	35¾	38¾	28½	31½	31	34	28¾	26¾
Maize, ...	42	45⅛	36⅜	40½	...	...	32	29
Masúr, ...	83½	41¾	34	37¾	...	...	...	...

[1] I., Set. Rep., 144. [2] Rep. 1873, pp. 72, 113.

Jaláláabad prices.

The following statement shows the average[1] price per rupee in sers of 80 tolas of the staple food-grains in the town of Jaláláabad from 1821 to 1873 :—

Year.	Wheat.	Gram.	Barley.	Common rice (unhusked.)	Maize.	*Joár.*	*Bájra.*	*Urd.*	*Moth.*	*Til.*
1821, ...	28	32	35	42	35	...	30	31½	40	16
1823, ...	40	60	70	56	50	...	35	35	35	26
1825, ...	45	70	75	55	35	37	25	30	29	18
1827, ...	35	45	50	77½	60	50	...	55	50	24
1829, ...	44	55	60	75	55	...	50	50	...	22
1831, ...	40	55	55	100	60	60	45	55	...	24
1833, ...	40	45	45	26	22	...	20	20	21	16
1835, ...	40	50	55	90	60	60	50	70	50	25
1837, ...	35	45	50	35	...	25	30	25	22	16
1840, ...	20	22	30	42	35	...	25	30	28	14
Average,	37	46½	51½	54	41½	32	33½	38	28½	17½
1841, ...	24	28	35	45	45	38	35	40	40	14
1843, ...	40	40	45	50	45	42	35	40	40	16
1845, ...	36	...	45	52½	52½	40	40	37½	40	14
1847, ..	31	...	40	45	35	29	28	30	25	13
1850, ...	40	50	55	36	55	50	40	40	40	25
1853, ...	35	45	50	32	30	...	25	28	30	14
1855, ...	47	65	95	52	45	50	40	40	45	22
1857, ...	40	57	70	72	50	50	...	50	45	17
1860, ...	24	25	30	55	11	10	10	10	10	10
1861, ...	14	15	20	35	22	20	20	20	20	12
1862, ...	28	30	40	80	50	50	42	42	40	16
1863, ...	39	47	75	60	30	25	23	22	25	01
1864, ...	39	35	42	37	30	26	25	25	25	13
1865, ...	23	28	33	40	30	35	25	25	25	14
1866, ...	25	35	40	32	30	25	25	24	25	14
1867, ...	22	28	31	35	25	27	22	24	25	16
1868, ...	26	30	42	18	14	...	12	12	12	10
1869, ...	18	18	25	25	12	12	12	12	12	8
1870, ...	14	14	25	25	16	16	16	14	16	...
1871, ...	25	30	45	50	35	...	...	28	31	15
1872, ...	25	28	40	50	30	30	...	24	24	6½
1873, ..	24	30	40	40	28	28	...	27	28	8
Average, 1841-70, ...	31½	38½	46½	44½	35	34½	27	30⅝	...	...
Average, 1851-70, ...	30⅞	38½	48½	43½	32½	32½	...	28½	...	...

Opinions of Settlement Officers.

Both Messrs. A. Colvin and C. Grant, in 1862, thought that the harvest prices of grain had remained stationary, whilst the retail prices of the village Baniyas had risen, but there can be no doubt that since the mutiny both the harvest price and the retail prices of all edible grains have permanently risen. In his Thána Bhawan report Mr. Colvin states that the harvest price of wheat from 1841 to 1845 averaged 32 sers per rupee in Shámli and 31 sers in Kairána, falling between 1855 and 1859 to 36 sers per rupee in Shámli and 35 sers per rupee in Kairána. He attributes the highness of the rate in the first five years as due to the influence of the famine of

1 The general averages are calculated on the average price for each year, not for the years given in the above table alone.

1837-38. In 1860-61 the famine price of wheat rose to 8¼ sers per rupee, and the average price from 1862 to 1873 was 25 sers per rupee in Jalálabad. Mr. Grant, in his Bhukarheri report, notes that the produce which could be purchased at harvest for Rs. 100 in 1840, according to Mr. Thornton's tables, would cost in 1860 as follows in eight selected parganahs:—

Parganah.	Present cost of produce valued at Rs. 100 in 1840.	Increase or decrease per cent.	Parganah.	Present cost of produce valued at Rs. 100 in 1840.	Increase or decrease per cent.
	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.
Bhukarheri,...	94 11 0	Decrease 5 5 0	Bidauli, ...	97 3 0	Increase 2 13 0
Bhúma, ...	99 0 6	Ditto 0 15 6	Thána Bhawan.	102 15 0	Ditto 2 15 0
Jánsath, ...	109 14 4	Increase 9 14 4	Jhanjhána, ...	97 12 0	Decrease 2 4 0
Khátauli, ...	97 14 0	Ditto 2 2 0	Charthawal, ..	100 15 0	Increase 0 15 0

The average of all the parganahs shows that the produce procurable for Rs. 100 in 1840 costs only Rs. 100-8-1¼ in 1860, but, as stated above, it is since then that the great and permanent rise in prices has taken place.

Shámli and Muzaffarnagar.

The following statement shows the prices ruling in Shámli and Muzaffarnagar from 1840-41 to 1863-64, and in the district generally from 1858 to 1867: S = Shámli and M = Muzaffarnagar. The ser given up to 1863-64 contains 88 tolas of 180 grains troy each:—

Year.	Wheat.		Barley.		Gram.		Maize.	*Jodr.*		*Bájra.*		Common rice.		*Urd.*	
	S.	M.	S.	M.	S.	M.	S.	S.	M.	S.	M.	S.	M.	S.	M.
1840-41,	22	...	32	...	24	...	24	21½	...	21	...	31	...	19	...
1842-43,	29	...	40	...	31	...	35	31	...	30	...	45	...	26	...
1845-46,	30	...	40	...	35	...	42	40	...	38	...	51	...	30	...
1848-49,	32	...	60	...	40	...	32	40	...	37½	...	45	...	35	...
1849-50,	30	34 7/16	46½	54 5/8	37	27 5/16	33	31	40 3/8	38	40	47	45 7/16	23	25 6/8
1851-52,	44	38 5/16	52½	65 3/8	47	40 1/8	45	50	39 9/16	40	48 3/16	52½	39 1/16	30	32 5/16
1853-54,	33	28 ½	52½	38 1/4	42	29 1/8	35	35	31 7/16	34	35	42	35 2/8	32	29 7/16
1855-56,	45	27 3/16	55	76 3/8	50	46 1/2	45	46	48 1/16	42	48 ¼	54	48	43	40 1/8
1858-59,	32	27 9/16	50	40 7/16	40	38 1/16	27	26	32 ⅛	27	33 1/16	32½	40	23	32 ⅛
1860-61,	25	12 7/16	27	16 ¼	27	12 ⅛	9	9	13	9	14 ⅛	13	16 1/16	8	10 ¼
1861-62,	13	14 ⅛	18	19	14	13 1/16	30	25	18 7/16	25	19 7/16	35	24 ¼	22	18 3/16
1862-63,	29½	31 1/16	42	49 7/16	34	28 ¼	42	37½	34 5/16	38	33 5/16	45	50 3/16	26	31 9/16
1863-64,	38	28 5/16	60	44 1/16	48	31 9/16	45	40	29 5/16	1	33 1/16	45	...	22	25 3/16

Average prices throughout the whole district in sers of 80 tolas equal to 2·057 lbs. avoirdupois.

	Wheat.	Barley.	Gram.	Maize.	*Jodr.*	*Bájra.*	Common rice.	*Urd.*	*Múng.*	*Moth.*	Cotton.	Cotton seed.	*Ghí.*	Oil.	Salt.	*Gúr.*
1858, ...	30	45	40	40	40	40	43 1/16	40	35	40	4 1/2	51	2 3/4	7	...	16
1859, ...	26	35	32	32	35	35	33	32	30	35	4	40	2 3/8	5	8 1/2	14
1860, ...	8 1/4	10	10	10	10	10	16	9	10	10	3 1/2	22	2 3/8	5	8 1/4	10
1861, ...	16	20	13	28	27	27	32	13	13	27	3	40	2 1/2	5 1/2	6 1/2	8
1862, ...	35	60	30	50	35	35	50	35	32	35	6 3/8	40	2 1/4	7	7 1/4	24
1863, ...	21	27 1/2	21	32	30	30	30	20	24	30	1 3/16	30	2 1/8	3 1/4	6 1/4	12
1864, ...	21	27 1/2	23	27	27	27	31	20	20	27	1 1/4	30	1 7/8	5	6 1/4	11
1865, ...	21	27 1/2	22	25	25	25	32	21	14	25	3	30	1 1/2	7 1/2	7	10
1866, ...	20 1/4	34	25	27	25	25	25	24	29	25	2 1/2	30	1 3/16	7 1/2	7	17
1867, ...	23	32	19	26	26	26	35	22	20	25	3 1/4	30	1 3/8	5 1/2	7	7

These district averages are merely approximate, for the variations between them and the tahsíl averages are very great and are hardly reconcileable on any theory.

Jalálabad price-current.

Jalálabad is the great grain-mart of the district, and though from its position removed from the rail and the great lines of communication, the average rate per rupee is a ser or two lower than in Khátauli and Muzaffarnagar, still the prices ruling there must more nearly correspond to those obtaining in the greater number of the grain-markets throughout the district than in marts having exceptional advantages of position and trade like Khátauli. The difference is greatest in the case of the cold-weather crops, for, as the rains follow immediately after the harvest, there is little opportunity of transferring the crop to distant markets. The difference is least in the price of cotton and *gúr*, the latter of which is exported in the dry season. Comparing the prices for twenty years before 1841 in Jalálabad with those of the last twenty years ending in 1870, it appears that the price of wheat has risen 16 per cent.; that of gram, 17¼ per cent.; barley, 7; *jodr*, 20½; *urd*, 28¾; maize, 30; *munji* rice, 20; common rice, 18¾; *gúr*, 15; and cotton, 34 per cent. In commuting rents, Mr. Cadell has assumed 30 district sers or 33 standard sers per rupee for wheat as a fair average harvest price, and explains that though "this rate may appear, at first sight, to be needlessly low, yet care must be taken to fix rates which can be paid without difficulty in all except the most unfavourable years. Tenants, as a rule, have no capital on which to draw, and a price more nearly approaching to the minimun than to the arithmetical average must in practice be assumed." Comparing the statistics of

prices generally before 1861, we find the average price in local sers of wheat between 1822 and 1841 was 36·16 sers, and between 1842 and 1861 was 34·15 sers, and between 1838 and 1857 was 33·8 sers. Or if we to take twenty-five years in each period from 1818 to 1842 and from 1838 to 1862, we find that in the first period the average rate was 34⅔ sers to the rupee, and in the latter 32½ sers, so that the price of wheat is shown by both calculations to have risen about six per cent. in the north-western portion of the district. In other parts it is probable that improved communications had, even before 1861, caused a relatively greater rise in the price of grain, and it appears that prices have generally ranged higher in the eastern and more especially south-eastern parganahs. In no part, however, can the rise previous to 1861 have exceeded 10 per cent. Between 1824 and 1841 the average price of cotton was 20·3 sers to the rupee, and between 1842 and 1861 it rose to 16·3 sers. In 1862 it rose to 12 sers and in 1863 to 7 sers. *Gúr* sold on an average between 1822 and 1841 at 20·1 sers per rupee, and between 1842 and 1861 at 17·18 sers per rupee, showing a greater rise than grain, but less than cotton. The rise in prices was in no case very great up to 1861, and even in the eastern parganahs can never have been more than from 8 to 10 per cent. "There is, therefore, apparently," writes Mr. Cadell, "as little ground for Mr. Martin's rise of 25 per cent. as there is for the fall discovered by Messrs. A. Colvin and C. Grant. Mr. Martin, unfortunately, selected for comparison with Mr. Thornton's average of twenty years, a few years which included a famine. Messrs. Colvin and Grant, on the other hand, carefully excluded all years of scarcity and then compared the result with Mr. Thornton's average, taken from a period which closed with five years of famine prices."

Interest.

The cultivator, except he be a Ját, has often to borrow money at an usurious rate of interest to stock his farm: hence the axiom that cultivation is generally synonymous with indebtedness. Cent. per cent. is not unknown, 72 per cent. is by no means rare, and 50 per cent. is common enough. A man who effects a loan at 36 to 37 per cent. is considered lucky, and money is lent at 18 to 24 per cent. only on the very best security. The lowest rate known is 15 per cent. The money-lenders are chiefly Bohras, and they generally commence each transaction by adding on 25 per cent. straight off. For example, if a man borrows Rs. 20 from a Bohra, he is obliged to allow the Bohra to put down Rs. 25 against him in the bond.

Wages of artizans.

In 1875 mistry bricklayers received Rs. 15 per mensem; mistry smiths, Rs. 15, and mistry carpenters, Rs. 12 to Rs. 15. Skilled bricklayers, carpenters and smiths received six annas per day, and ordinary smiths and bricklayers five annas, and carpenters four annas. The wages of tilers and thatchers was three to four annas; of mate beldárs, three annas; beldárs, 2½ annas; coolies, 1½ annas, and boys, 1¼ annas. In 1850 beldárs

received two annas per day, and carpenters, bricklayers and blacksmiths three annas. With these may be compared the monthly wages of workmen ruling from 1858 to 1867:—

	1858.	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.
	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.
Dyers, ...	4 2	4 8	3 14	4 0	3 4	4 10	4 12	5 4	5 4	5 6
Potters, ...	3 2	2 14	3 4	3 4	3 4	3 14	4 4	4 6	4 10	4 14
Tanners, ...	4 0	4 0	4 0	4 0	4 8	4 14	5 2	5 6	5 12	6 0
Weavers, ...	3 8	3 8	3 6	4 4	4 6	4 14	5 4	5 10	6 0	6 4
Cloth-printers, ...	3 2	3 2	3 2	3 14	3 14	4 2	4 12	4 12	4 14	5 4
Brick-burners, ...	4 0	3 12	3 12	4 6	4 14	5 12	5 14	6 2	6 6	6 10
Carpenters, ...	5 10	5 10	5 10	5 14	4 10	6 12	6 12	7 0	8 12	7 0
Blacksmiths, ...	4 14	4 14	5 4	5 8	5 8	5 12	5 12	6 0	5 4	6 2
Cotton-carders, ...	3 4	3 0	3 0	3 4	3 10	3 10	3 12	3 12	4 4	3 12
Tailors, ...	5 0	4 12	4 12	5 0	5 0	5 4	5 4	6 0	6 0	6 4
Boatmen, ...	3 0	3 0	3 0	4 0	4 0	4 0	4 0	4 0	4 0	4 0
Masons, ...	4 2	4 2	4 10	5 0	5 0	5 0	5 12	5 12	6 0	6 12
Labourers, ...	3 0	3 0	3 0	3 2	3 2	3 8	3 8	4 4	4 8	4 12
Farm-labourers, ...	1 14	2 4	2 4	2 4	2 4	2 14	3 0	3 0	3 0	3 0
Ploughmen, ...	2 12	2 12	3 4	3 0	3 0	3 0	3 8	4 0	4 0	4 0
Water-carriers, ...	1 12	1 12	1 12	1 12	2 0	2 0	2 4	2 4	2 4	2 4
Sweepers, ...	2 0	2 0	1 0	1 0	2 0	2 0	2 0	3 0	3 0	3 0

The rates above given are those prevailing in the rural portions of the district. In 1825, and now in most villages, the following dues were collected by the landowners:—Re. 1 on each loom and each labourer's house; Rs. 2 on each dyer's, printer's and shepherd's house and on each oil-mill; Rs 3 on each goldsmith's house, and thirty-two pairs of shoes from each shoemaker. A due was also taken from grain-parchers and on marriages.

Agricultural labouring population.

The tahsíldárs estimate the number of landless, unskilled labourers in each tahsíl to be as follows, and there is reason to believe that their figures sufficiently represent facts for all practical purposes:—

Tahsíl.	Total labourers.	Agricultural.	Tahsíl.	Total labourers.	Agricultural.
Jánsath, ...	25,000	10,000	Shámli,... ...	40,155	20,000
Muzaffarnagar, ...	27,481	10,000	Budhána, ..	20,000	14,000

These figures give 54,000 male adult agricultural day-labourers in the whole district. This class consists principally of Chamárs, Sainis, Kahárs,

Juláhas, and Gáras, with a few Játs. The nominal rate of pay is from one and a half to two annas a day, but in reality they receive an equivalent according to the nature of their work. Thus reapers receive a sheaf *(púli)* of the crop that is being cut, which yields or is supposed to yield five *pukka* sers of grain, besides the straw. The five sers are apparently understood to represent one kuchcha bígha of work. Weeders, again, usually get two annas a day and sometimes work by contract. Ploughmen ordinarily get one-eighth of the produce of the land ploughed, four kuchcha maunds going to the blacksmith and carpenter who made the plough. The services of the Chamár, Saini and Kahár women are extensively employed in weeding at the rate of one or one and a half anna a day; in plucking cotton or saffron, getting one-tenth, one-sixth, one-fifth, or even one-fourth of the former, and one-sixth, one-third, or one-half of the latter, as the case may be; and in transplanting rice, receiving from two to two and a half sers a day. They are also sometimes employed in cutting *chari* at one and a half anna a day. The fluctuations in the rate of wages for plucking cotton are remarkable. The limit of remuneration to female labour is said to be two annas or the equivalent. Children of the same castes are employed as cowherds and for gathering fuel. It is difficult to ascertain the estimated value of their services: perhaps thirteen or fourteen kuchcha maunds of grain, a year, come nearest to the mark. As sugar-cane is not sold by weight, labourers get so many sticks of cane with the green leaves on *(gaula)* for cutting it. Obviously the system of payment in kind is as profitable to the day-labourer and the artisan as it is convenient to the cultivating proprietor, because a couple of annas or so, supposed to be the equivalent of the produce received in return for the services rendered, would not purchase the same amount of raw material in any of the district markets. This circumstance explains the possibility of maintaining existence amid poverty, to which the circulation of the current coinage is almost unknown. In 1825 Mr. Cavendish wrote:—"There are no slaves, but a kind of hereditary connection appears to exist between the zamíndárs and the low-caste (Chamár) ploughmen employed by them. The latter cannot change masters, but they may become day-labourers or leave the village. The village servants[1] are chiefly paid in kind, and all appear to be removable by the zamíndárs except the sweepers." In nothing has the levelling nature of our administration been shown more than in the emancipation of these village serfs, who are now free to move where they like and take service with any one they please.

Trade.

The district, as already noted, is essentially an agricultural one, and the exports are entirely of country produce. Some attempts were made between 1868 and 1871 to gauge the amount of produce locally consumed and the amount of produce exported; the

[1] Both the patwári and village watchmen were then chosen by the people and were servants of the community.

results of the enquiries then instituted may be given as follows in standard maunds:—

Year.		Rice.	Cotton.	Oil-seeds.	Joár and bájra.	Wheat and barley.	Pulses.	Other crops.	Total.
1868-69,	Exports,	43,263	34,735	1,500	15,672	1,499,349	34,000	523,288	2,151,798
	Retained,	241,577	14,315	11,960	109,314	1,469,105	23,389	2,066,485	3,936,145
	Total,...	284,840	49,050	13,460	124,986	2,968,445	57,389	2,589,773	6,087,943
1869-70,	Exports,	246,106	46,209	1,314	42,950	1,500,021	5,315	421,212	2,263,127
	Retained,	150,375	36,492	11,119	510,805	1,469,105	61,247	2,916,861	5,156,004
	Total,...	396,481	82,701	12,433	553,755	2,969,126	66,562	3,338,073	7,419,131
1870-71,	Exports,	251,690	74,710	...	45,000	1,475,990	6,230	302.640	2,156,260
	Retained,	189,129	25.010	15,455	547,770	1,436,850	51,324	2,834,515	5,100,053
	Total,...	440,819	99,720	15,455	592,770	2,912,840	57,554	3,137,155	7,256,313
Average,	Exports.	180,353	51,885	938	34,541	1,491,784	15,181	415,713	2,190,395
	Retained,	193,693	25,272	12,844	389,296	1,458,353	45,320	2,605,954	4,730,732
	Total,...	374,046	77,157	13,782	423,837	2,950,137	60,501	3,021,667	6,921,127

Taking these tables as tolerably fair estimates, it appears that wheat and barley, rice and the millets form the staple of the exports, and that the district, on an average, can spare about 80,000 tons of food-grains for export. The only other data relating to trade statistics at present in existence are the octroi returns of the several Municipalities given hereafter under Muzaffarnagar, Shámli, Kairána, and Kándhla, and but little can as yet be gleaned from them.

Income and expenditure.

The following statement compiled from the treasury accounts shows the income and the expenditure upon civil administration for the years 1860-61, 1870-71, and 1873-74:—

Receipts.	1860 61.	1870-71.	1873-74.	Expenditure.	1860-61.	1870-71.	1873-74.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Land-revenue, ...	10,16,160	11,30,316	12,26,946	Land-revenue (salaries and contingencies.)	78,192	79,821	60,043
Excise, ...	28,362	42,570	42,552	Excise, ...	4,169	13,495	3,182
Stamps, ...	29,668	65,728	72,907	Stamps, ...	4,747	3,136	857
Law and justice,	10,111	9,236	14,598	Law and justice,	40,777	17,021	34,861
Income-tax, ...	29,380	79,143	...	Income-tax, ...	7,804	1,299	...
Local funds, ...	72,111	1,33,642	60,260	Local funds, ...	75,072	99,791	64,107
Canal collection,	2,03,084	3,70,200	3,64,799	Public funds, ...	13,115	1,06,523	2,55,126
Post-office, ...	4,251	8,814	10,834	Post-office, ...	95	7,081	13,751
Police, ...	4,277	3,348	2,502	Pensions, ...	7,804	16,568	21,182
Mutiny, ...	10,452	..	...	Police, ...	1,17,829	56,819	96,059
				Remittance charges.	88	204	748
				Settlement charges,	...	22,659	36,911
				Mutiny, ...	28,568	...	...
Total, ...	14,07,856	18,42,997	17,95,398	Total, ...	3,78,860	4.24,417	5,86,827

In 1857-58, the first year for which records remain, the revenue was Rs. 12,51,194 and the expenditure amounted to Rs. 2,47,812. The following statement shows the number of estates upon the revenue-roll of the district with the total land-revenue paid and the number of registered proprietors paying land-revenue direct to Government for three years since the mutiny.

	1857-58.	1860-61.	1870 71.
Number of estates, ...	1,139	1,143	1,198
Number of registered proprietors or coparceners, ...	3,233	3,266	2,227
	Rs	Rs.	Rs.
Total land-revenue paid by all estates	11,07,124	10,04,562	10,36,643
Average land-revenue paid by each estate, ...	972	1,008	873
Average land-revenue paid by each proprietor, ...	342	307	465

Income-tax.

The number of incomes over Rs. 500 for the purposes of the income-tax of 1870 was 2,106, giving an aggregate income of Rs. 51,25,395. The actual assessment at six pies in the rupee during 1870-71 on incomes exceeding Rs. 500 was Rs. 81,753. There were 1,041 incomes between Rs. 500 and Rs. 750 per annum ; 353 between Rs. 750 and Rs. 1,000; 294 between Rs. 1,000 and Rs. 1,500; 189 between Rs. 1,500 and Rs. 2,000; 228 between Rs. 2,000 and Rs. 10,000; 10 between Rs. 10,000 and Rs. 1,00,000 and above Rs. 1,00,000; total persons assessed were Rs. 2,115.

Stamps.

Stamp duties are now collected under the General Stamp Act (XVIII. of 1869) and under the Court Fees' Act. The following statement shows the revenue and charges under this head for a series of years:—

Year.	Adhesive stamps and hundis.	Blue-and-black document stamps.	Court fees.	Duties and penalties realised.	Total receipts.	Gross charges.	Net receipts.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1862-63, ...	794	34,522	...	15	35,331	2,611	32,720
1863-64, ...	770	40,735	...	79	41,584	3,195	38,389
1864-65, ...	660	40,623	...	430	41,713	2,696	39,017
1865-66, ...	825	46,371	...	1 6	47,312	3,182	44,130
1866-67, ...	607	42,684	...	105	43,396	3,196	40,200
1867-68, ...	694	55,951	...	288	56,933	3,779	53,154
1868-69, ...	582	61,620	...	60	62,262	3,735	58,527
1869-70, ...	574	72,644	...	419	73,637	4,202	69,435
1870-71, ...	516	17,196	47,259	525	65,496	3,648	61,848
1871-72, ...	523	16,203	48,468	43	65,237	1,534	63,703
1872-73, ...	584	20,856	51,599	69	72,608	1,664	70,944

Registration.

In 1871-72 there were 2,878 documents registered under the provisions of the Registration Act (VIII. of 1871), on which fees to the amount of Rs. 6,832 were collected. The expense of establishment, &c., during the same period amounted to Rs. 2,721. There were 1,916 registrations affecting immovable property in which the registration was compulsory under section 17 of Act VIII. of 1871, and 602 in which the

registration was optional. The other registrations affected refer to movable property, wills, &c., and the total aggregate values of all the documents registered amounted to Rs. 12,79,649.

Excise.

The following statement shows the revenue due to excise during the ten years 1862-63 to 1871-72 in this district :—

Year.	License fees for vend of spirits.	Duty on spirits.	Opium.	Tári.	Intoxicating drugs.	Fines, &c.	Gross charges.	Net receipts.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1862-63, ...	869	15 103	13,682	...	1,038	...	741	29,951
1863-64, ...	4,569	12,951	14,076	...	945	6	1,132	31,415
1864-65, ...	9,009	13,378	11,979	...	1,734	820	8,532	28,388
1865-66, ...	10,998	12,103	16,992	...	2,355	64	11,272	31,240
1866-67, ...	11,645	13,434	20,176	9	1,424	515	12,980	34,223
1867-68, ...	13,345	12,418	23,920	...	1,577	46	15,244	36,062
1868-69, ...	19,447	10,399	24,704	...	2,087	54	15,162	41,529
1869-70, ...	1,340	7,913	24,837	...	1,659	58	15,786	20,422
1870-71, ...	6,384	11,608	21,984	...	2,223	12	13,362	28,849
1871-72, ...	11,885	15,055	20,640	...	2,235	18	12,195	37,638

Canal revenue.

The following statement shows the receipts and charges on account of canals for a series of years :—

Ganges Canal.					Eastern Jumna Canal.				
Year.	Collections.	Patwáris' fees.	Establishment.	Net collections.	Year.	Collections.	Establishment.	Fees.	Net collections.
	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1866-67, ...	1,78,838	3,447	965	1,74,426	1866-67, ...	49,009	295	2,307	46,407
1867-68, ...	2,38,855	4,819	864	2,33,172	1867-68, ...	1,66,315	290	2,678	1,63,347
1868-69, ...	1,84,029	3,586	850	1,79,593	1868-69, ...	...	Not given.		
1869-70, ...	2,45,948	9,352	878	2,35,718	1869-70, ...	1,67,555	299	2,578	1,64,678
1870-71, ...	1,91,939	10,328	859	1,80,752	1870-71, ...	...	Not given.		
1871-72, ...	1,94,336	8,208	864	1 85,264	1871-72, ...	1,46,895	296	5,963	1,40,636
1872-73, ...	1,91,149	8,500	791	1,81,858	1872-73, ...	1,41,865	275	7,611	1,33,979

History.

Tradition connects the district with the Pándava Ráj of Hastinápur, and subsequently with the Chauhán kingdom of Dehli, ruled over by Prithiráj. Khúda, Khúdi, and Baghra in the eastern tract were then the seats of petty Rajas subordinate to the Dehli ruler. The Musalmáns became paramount in the beginning of the thirteenth century, and from that time to the dissolution of the empire Muzaffarnagar continued to be a dependency of the sovereigns of Dehli. The earliest colonists were Rajpúts, Tagas, and Brahmans. The Rajpúts belonged to the Gaur and Pundír clans and the Brahmans to the great Gaur subdivision. Next came the Játs, who arrived in wave after wave, and gradually occupied nearly the

whole of the south of the district. To the north in Púr, Charthâwal, Shikárpur and a few of the eastern parganahs, Tagas are still to be found, but in the whole of the western parganahs and in Kándhla and Bhúma they have almost entirely disappeared and given place to Játs. These latter now form the characteristic element amongst the proprietary agricultural communities throughout two-thirds of the district. The Játs occupied all the more fertile portions of the district, leaving the parganahs with a sandy soil along the course of the Ganges canal, Bidauli and Kairána on the extreme west and Gordhanpur on the extreme east, open to other colonists. These tracts were afterwards taken up by Gújars, who there still form the majority of the proprietary population. Occasionally too, as in Púr, stray colonies of Tagas joined the Gújars and found their way into places which the Játs declined to colonise, and subsequently great immigrations of Shaikhs, Sayyids and Pathâns took place and parcelled out amongst themselves the remainder of the district.

Timúr's invasion.

The first great event connected with the district of which we have any distinct record in the Persian histories is Timúr's invasion which took place in January, 1399 A D.[1] After the sack of Meerut the conqueror marched northwards through the Meerut district by either Firozpur in parganah Hastinápur of the Meerut district or Firozpur in parganah Bhukarheri of this district,[2] towards Tughlikpur in parganah Púr Chhapár, and when he had got within five *kos* of his encamping-ground he heard that the Hindús had assembled at the fords of the Ganges. Timúr then sent on a force of 5,000 horse to disperse the enemy and marched with the remainder of his forces to Tughlikpur. Whilst there, information was received of a force of Hindús coming down the river in forty-eight boats with the intention of fighting. The account of the naval contest that ensued may be given in Timúr's own words:—"I mounted my horse, and, taking with me one thousand troops who were at hand, we struck our heels into the flanks of our horses and hastened to the side of the river. As soon as my braves saw the boats, some of them rode their horses into the river and swam to the vessels; then, seizing fast hold of the sides, they defeated all the efforts of the Hindús to shake them off. They forced their way into some of the boats, put the infidels to the sword, and threw their bodies into the river; thus sending them through water to the fires of hell. Some of my men dismounted, and, proceeding to the ford, assailed the enemy with arrows. The occupants of the boats returned the arrows, but the vessels were at length wrested from their possession and were brought with their contents to my presence. The enemy had lashed ten of their boats together with chains and strong ropes, and these vessels maintained the fight. My men plied them with arrows till they slew many of them; they then swam off and, boarding the boats, put every living soul to the sword, send-

[1] Dowson's Elliot, III., 453. [2] I am inclined to think that the Firozpur in Meerut is intended.

ing them through water to the fires of hell." After this affair of the boats Tímúr returned to Tughlikpur, and thence crossed the Ganges higher up into the Bijnaur district. Bábar, too, in his fifth expedition passed down the Duáb through this district, but for many years we have no specific mention of it or its people. The doctor Mukarrab Khán, the Bárha Sayyids, and the Sikhs are those alone whose history need detain us in a short historical sketch like the present one.

Nawáb Mukarrab Khán.

During the reign of Akbar and his successors this district became a favourite resort of the nobles of the court, many of whom obtained *jágírs* here. Shaikh Hasan or Hassu, a son of Shaikh Bína (or Bhaniya) of Pánipat rose to great eminence under Jahángír and received the title of Mukarrab Khán. Both father and son were by profession surgeons, and in 1597 A.D. they succeeded in curing a bad wound which the Emperor Akbar had received from a buck at a deer fight. Hassu was physician to Prince Salím, who on his accession to the throne made him governor of Gujrát. In 1618 he was removed to Bihar, to make way for Prince Sháhjahán, and in 1621 we find him governor of Agra. On the accession of Sháhjahán, Mukarrab Khán was pensioned and received Kairána, his native town, and the surrounding parganahs in jágír. His son Rizk-ullah was a doctor under Sháhjahán and a commander of 800. Aurangzeb made him a Khán. He died in 1668 A.D. The poet Sadullah, known by his *takhallus* of *Maslha-i-kairánawi*, who wrote an epic poem on the loves of Síta and Ráma, was the adoptive son of Mukarrab Khán. A follower of Mukarrab Khán founded Shámli, but the entire *jágír* was resumed by Bahádur Sháh.

Bárha Sayyids.

The history of the Bárha Sayyids is so intimately connected with this district that a brief notice of their families and the influence that they once exercised is necessary to complete the local history of this portion of the Duáb. Towards the latter half of the fourteenth century the Sayyids generally seem to have attained to considerable power, and may possibly have induced the Panjábi Sayyids to move to their assistance. However this may be, at the beginning of the fifteenth century we find the throne of Dehli occupied by a Sayyid dynasty and the numerous offspring of Ali and Fatima crowding to the court for places and pensions, and they were not disappointed in their quest, for these Sayyid emperors were munificent patrons of their co-religionists. In 1414 A.D. the Sultan Khizr Khán conferred the *shikk* of Saháranpur on Sayyid Sálim, the chief of the Sayyids,[1] and though, as hereafter shown, the Sayyid settlements in Muzaffarnagar can be traced back to the middle of the fourteenth century, we may safely assume that their progress and extension were influenced, in no small degree, by the existence of a Sayyid dynasty at Dehli and of a Sayyid governor in the Saháranpur *shikk*. The Sayyids of the Bárha themselves do not give a chronologically accurate

[1] Dowson's Elliot, IV., 46. The authorities for the local history of the Sayyids are notes by Messrs. Leeds, Blochmann and Cadell, the records of the Board of Revenue, and local inquiries.

account of their origin and history. According to their family chronicles, they are descended from one Sayyid Abul Farah of Wásit near Baghdád, who, owing to the troubles caused by Hulágú's invasion of Baghdád, emigrated to India with his twelve sons in the time of Nasir-ud-dín Mahmúd, son of Iltitmish (Altamsh), who reigned from 1246 to 1265 A.D. Abul Farah is said to have remained in India until the time of Sikandar Lodi (1488-1517 A. D.), when, hearing of the death of Hulágú, he returned to Persia, leaving, by the emperor's command, four of his sons, who eventually became the heads of the four great branches of the Sayyid family in this district. The dates alone show the chronological incorrectness of this account. The four brothers settled in the Panjáb in villages now in the Patiála territory :

(1.) Sayyid Daúd settled in Tihanpur.
(2.) Sayyid Abulfazl settled in Chhatbanúr.
(3.) Sayyid Abulfazáil occupied Kúndli.
(4.) Sayyid Najm-ud-dín Husain settled in Jagner.

The Chhatbanúr branch is also known as the Chhatrauri, and the Jagner branch has the synonym of Jhajari. After their settlement in these villages the local history makes the Sayyids continue "in the service of Shihább-ud-dín Ghori" (1193-1205 A.D.), another manifest anachronism. The oldest inscription that has been discovered relating to the Sayyids of this district is that on the tomb of Ibn Sálár Chhatrauri, the Sá'ár Auliya at Sambalhera. It bears date 777 H. (1375 A.D.), and local tradition makes him eighth in descent from Abul Farah.[1]

Regarding the present condition of the home of the Sayyids in Patiála Mr. Cadell writes:—"A Kúndliwál told me that he had been in Patiála when in service in the Panjáb, and that he had gone to see the cradle of his race. He says that the true name is Chhatbanúr, now a large town with several thousand Sayyid inhabitants. In Kúndli there are only a few huts. Tihanpur is a petty hamlet and Jagner is uninhabited." Shortly after the settlement in the Panjáb the family divided into two branches, one of which settled at Bilgrám in Oudh and sent a colony to Márahra in the Eta district, and the other emigrated to the Duáb. Both families claim relationship with the Sayyids of Khairabad and Fatehpur Haswa, but as early as the reign of Akbar, the pretensions of the Bárha Sayyids to be descendants of Ali and Fatima were not accepted by their contemporaries.

The name Bárha.

[1] The text of the inscription (Proc. A. S., Ben., 1872 166) runs as follows:—

"1. The beginning of the building of this tomb was on 3rd Jumáda I.
2. After 777 years had passed away since the flight of the beloved prophet.
3. (During) the reign of Fírúzsháh of high fortune, whose throne is the highest heaven, the victorious, the praiseworthy.
4. Ibn Sálár, son of Husain, ordered this tomb of heavenly grandeur (to be built).
5. May God Almighty in His kindness and mercy receive him in the eternal mansion!"

The Emperor Jahángír says of them that "the personal courage of the Sayyids of Bárha, but nothing else, was the best proof that they were Sayyids." The derivation, too, of the name 'Bárha' is uncertain. Some say that it is derived from *báhir*, 'outside,' because the Sayyids, disgusted with the debaucheries of the Mína bazar at Dehli, preferred to live 'outside' the city. Others derive the name from the fact of the Sayyids being Shiahs and followers of the twelve (*bárah*) Imáms, or that the name was originally *sá lát abrár*, 'the pure Sayyids.' The authors[1] of the *Tabakát-i-Akbari* and the *Tuzúk-i-Jahángíri* both derive the name from the number of the principal villages (*bárah* = twelve) held by the Sayyids in this district, and this is the most probable derivation. Similar settlements of foreign communities in India are distinguished in the same way; thus we have a '*Pathánon ke bárah basti*,' or 12 villages of Patháns, in parganah Ahár of the Bulandshahr district, and the *chaurásis* (84), *báonis* (52), *chaubísis* (24), and *athárahs* (18) of these provinces are all known by the names of clans that founded them.

Settlement in Muzaffarnagar.

Tradition has it that representatives of the four Panjábi clans came about the same time into this district, and that the first settlement of the Kúndliwál branch was in Majhera; of the Chhatbanúri or Chhatrauri branch was in or near Sambalhera; of the Jagneri or Jhajari branch was in Bidauli and Palri, and of the Tihanpuri branch was in Dhásri and Kumhera. "With the exception of Palri," writes Mr. Cadell, "the earliest Sayyid settlements were made in the sandy tract of the old Sambalhera parganah or in its immediate neighbourhood, and it was not until later that the Sayyids obtained a footing in the richer portions of the district. Even tradition allows that the earlier acquisitions were made through the good will of Hindu owners whom the Sayyids placed, in various ways, under obligations. This tends to show that the fertile portions of the district were then fully occupied, and that the Sayyids came into the district anxious for a settlement within an easy distance of the capital, but not yet holding such high offices at court as would enable them to obtain possession of fertile townships already settled. This view is confirmed by the fact that a family of Gardezi Sayyids, who are allowed to have come to the district before the Bárha Sayyids, settled on the edge of the same wilderness of sand, but nearer the better land and close to old Ját and Rajpút communities." It is possible that, in addition to the fact of the reigning family being Sayyids, the existence of a colony of their co-religionists in this district first caused the Panjábi Sayyids to turn their attention to this portion of the Duáb, and this can only have taken place after they had resided long enough in their original settlements to feel the pressure of increased numbers and consider themselves able to establish new homes amid an alien and probably hostile population.

1 Blochmann's *Ain-i-Akbari*, I., 390-5.

Rise of the Sayyids.

Throughout the reign of Akbar and his immediate successors the Sayyids of Bárha[1] took part in almost every campaign of importance; their usual place was in the *haráwal* or vanguard, and they distinguished themselves ever by their courage and bravery. The Kúndliwáls first came to notice, and next to them the Tihanpuris, who, under the brothers Sayyid Abdullah Khán and Sayyid Husain Ali Khán, raised the name of Bárha Sayyids to the zenith of its glory. Their story is told under the general history of the introduction and is also noticed hereafter. Their acquisitions, however, in this district were not of a permanent nature, and their downfall was so complete that not a tithe of their ancient possessions now remains to their descendants. The Chhatrauris, too, had their time of distinction. In the struggle between Muhammad Shah and the Tihanpuris, the Chhatrauris sided with the former, and Sayyid Nusrat Yár Khán, Shahámat Khán, Rukn-ud-daula and many others received substantial rewards in return for their services. The further history of the family will better be told by sketching the progress of each branch to the present day. It may, however, be noted here, that the Sayyids have private marks of recognition which "they say," writes Elliot,[2] "have been very successful in excluding impostors from the tribe. Particular families have denominations, such as dog, ass, sweeper, &c., which are derived from the menial offices which, it is said, some Sayyids of this family performed for the Emperor Humáyún when reduced to extremities during his flight from Sher Shah."

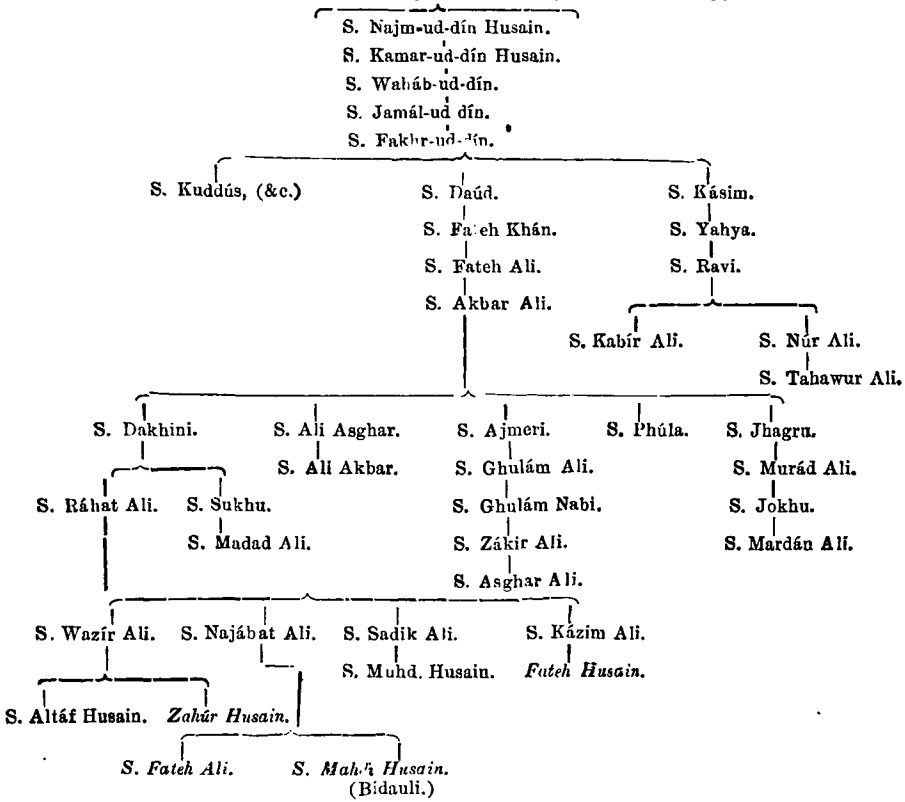
The Jagneri Sayyids.

Sayyid Kamar-ud-dín, son of Najm-ud-dín Jagneri, is said to have first settled at Bidauli, in the west of the district. Some generations later, a descendant of his, one Sayyid Fakhr-ud-dín emigrated to Palri in parganah Jauli and settled there. He purchased proprietary rights in Palri, Chandauri, Chandaura, Tulsipur and Kheri, which for a long time remained in his family. During the drought which occurred at the last settlement the Jagneris were obliged to dispose of all their property in Jánsath except a tenth share in the village of Palri. Most of the Jánsath Jagneris now earn a subsistence as cultivators, labourers, or servants, and many have emigrated to the Páuipat and Dehli districts. The present head of the Bidauli family, Muhammad Husain, held the office of Názim in Oudh before the annexation, and his nephew, Mahdi Hasan, was a chakladár. The latter saved the lives of some fugitives during the mutiny, and received a pension and an order to leave Oudh and reside in Bidauli. There he has devoted himself to the improvement of his estate, which is not an extensive or fertile one, but with care and supervision can yield an income sufficient to

[1] In the twenty-first year of Akbar's reign the Bárha Sayyids were engaged against the Hindu rebels in Ajmer: Dowson's Elliot, VI, 54. In the forty-first year Sayyid Jalál fought in the Dakhin: *Ibid*, 96. In the war with Khusru, Saif Khán, son of Sayyid Mahmúd, did excellent service, having received not less than seventeen wounds, and Sayyid Jamál-ud-dín was mortally wounded: *Ibid*, 267, 273. [2] Beames' Elliot I, 12. This account is not altogether incorrect, for I find that some such distinctions are common to all the branches of this Sayyid stock.

support the moderate requirements of the dignity of the Bárha Sayyids of the present day. The census of 1872 shows 1,116 Sayyids in parganah Bidauli, and the settlement records of 1863 give them as holding 15,799 acres as proprietors, of which 9,079 acres represent their old holdings, and the remainder has been acquired by purchase by one or two families. The following table[1] gives the descent of this branch from the founder, omitting collateral branches:—

Genealogical tree of the Jagneri branch of the Bárha Sayyids.



Thus the present Sayyid Mahdi Hasan of Bidauli is thirteenth in descent from Sayyid Najm-ud-dín Husain, the founder of his house, and allowing thirty years for each generation, this would bring us to the close of the fifteenth century for the emigration from Jagner. Though several members of this branch obtained honourable employment under Akbar and his immediate successors, they have never reached the distinctions for which the members of the other branches are so remarkable. The persons whose names are in italics were alive in 1864.

[1] The genealogical tables of the Bárha Sayyids are too voluminous for insertion here, and I shall only give one or two under each family as an example, and to show the number of generations which has elapsed since their emigration from the Panjáb.

Kúndliwáls.

Sayyid Abul Fazáil, Kúndliwál, settled in Majhera, which is said to have been originally known as Munjhera from the quantity of *múnj* grass (*saccharum moonja*) which grew there. At the present time the traces of masonry buildings, for some two miles, along the road between Majhera and Míránpur testify to its former greatness. Bálipura, which lies between the two villages, was formerly a muhalla of Majhera. Amongst the descendants of Sayyid Abul Fazáil mention is made in the *Ain-i-Akbari* of the brave old soldier Sayyid Mahmúd as the first of the Bárha Sayyids who took service under the Timúrides. He was with Sikandar Súr in Mánkot, but seeing that the cause of the Afgháns was hopeless, he left them and went over to Akbar. In the first year of Akbar's reign he fought in the campaign against the forces of Muhammad Sháh led by the celebrated Hemu. In the second year (1557 A.D.) he was engaged in the Ajmer campaign, and in the following year took part in the capture of fort Jitasáran[1] and an expedition against the turbulent Bhadauriyas of Hatkánth in the Agra district. In 1561 he obtained a *jágír* near Dehli, and towards the end of 1574 took part in the expedition with the Amroha Sayyids against Raja Madhukar of Orchha.[2] He died in 982 H. (1574 A.D.), and was buried at Majhera, where his tomb exists to the present day with the following inscription in Arabic[3]:—

Sayyid Mahmúd.

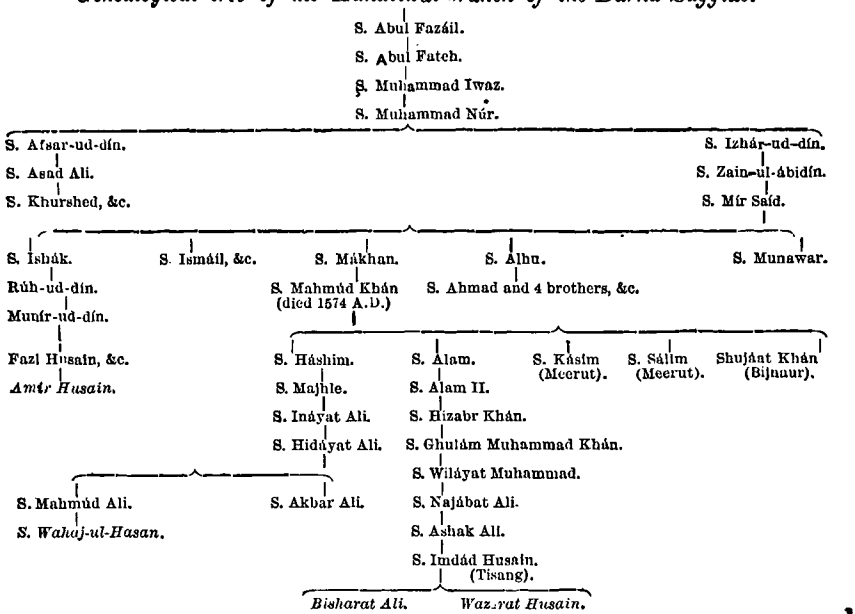
"In the name of God, the merciful, the clement. O God, bless the prophet, the faithful, the pure, of the family of Háshim, Muhammad, and his family, and his friends who were instructed in his manners. God is everlasting and praiseworthy in all His doings. The great amír, who is pardoned and rendered pure, and has reached the vicinity of the mercy of God, the favour-bestowing King, Sayyid Mahmúd Khán, a lord of the drum and the flag in his time, died—may God cover him with His pardon—on the night of Thursday, 6th Jumáda II., 982 (or 23rd September, 1574, A.D)."

Sayyid Mahmúd[4] was "a man of rustic habits and great personal courage and generosity. Akbar's court admired his valour and chuckled at his boorishness and unadorned language; but he stood in high favour with the emperor. Once on his return from the war with Madhukar of Orchha he gave in the state hall a verbal account of his expedition, in which his 'I' occurred oftener than was deemed proper by the assembled Amírs. 'You have gained the victory,' interrupted Asaf Khán, in order to give him a gentle hint, 'because His Majesty's good fortune (*iklál-i-pádisháhí*) accompanied you.' Mistaking the word '*ikbál*' for the name of a courtier, 'Why do you tell an untruth?' replied Mahmúd; 'Ikbál-i-Pádisháhí' did not accompany me. I was there and my brothers; we licked them with our sabres.' The emperor smiled, and bestowed upon him praise and more substantial favours. Once Mahmúd was asked how many generations backwards the Sayyids of Bárha traced their descent. Accidentally a fire was burning on the ground near the spot where Mahmúd stood. Jumping into it, he exclaimed, 'If I am a Sayyid the fire will not hurt me; if I am no Sayyid I shall get

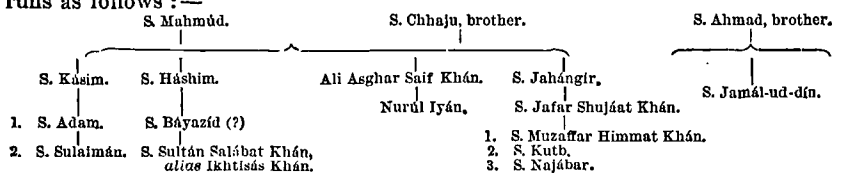
[1] Dowson's Elliot, VI., 22 [2] Gazetteer, I., 555. [3] J. A. S., Ben., XL., 260 (Blochmann).
[4] Blochmann's Ain, I., 389, 407, 417, 440, 501.

burnt.' He stood for nearly an hour in the fire, and only left it at the earnest request of the bystanders. His velvet-slippers showed, indeed, no trace of being singed!"

Genealogical tree of the Kúndliwál branch of the Bárha Sayyids.



The persons whose names are in italics were alive in 1864. It will be seen that the table differs somewhat from the list given by Mr. Blochmann, which runs as follows :—



Sayyid Alhu fell at Chunár, where his tomb is. Sayyid Ahmad rose to the rank of a commander of 2,000 under Akbar. He was governor of Patan in Gujrát for some time and died in 982 H. (1574 A.D). His tomb is held sacred, and he and his four brothers are known as the "pánch shahíd." The sons of one or more of these and grandsons of Sayyid Alhu were Sayyid Yúsuf and Sayyid Wali Muhammad Khán; from the latter came Kamál-ud-dín Khán, *alias* Jamál-ud-dín Khán I., Saíd Khán, *alias* Jamál-ud-dín Khán II., &c. The first Jamál-ud-dín Khán perished at the siege of Chítor. Sayyid Ismáil and Sayyid Ishák were sons of a second wife, known by the fact that Majhera was divided between the two families, and in this way Ismáil and Ishák got one-quarter share each, while the other brothers got only one-sixth each. Pattís Ismáil and Ishák are in this way larger than pattís Munawar and Alhu. Patti Mákhan became a

place of some importance and has been entered as a separate village in the revenue records. The tomb of Sayyid Mahmúd Khán is in Mákhanpur, and the marble tombs of Sayyid Mákhan and his son, Sayyid Saif Khán, who predeceased him, are also in the same village. Walípura, now known as Bálipura in patti Alhu, was named after Wali Muhammad. Sayyid Kásim and Sayyid Háshim served with Sayyid Ahmad in Gujrát and so distinguished themselves by their bravery that they were rewarded by a grant of a *jágír* in Ajmer. They were frequently employed in the van of the army (*haráwal*). Sayyid Háshim settled at Háshimpur in parganah Bhúma; he was killed at the battle of Sarkich near Ahmadabad, and Sayyid Kásim was wounded at the same place. Kásim, on his recovery, was appointed thánádár of Patan, and enjoyed similar high commands until his death in 1007H. (1598 A.D.). His family settled at Mawána in the Meerut district, where they held 21 villages. Sayyid Ali Asghar Saif Khán is said by some to be the son of Sayyid Mahmúd, but local authority makes him the brother of Mahmúd, and the same who is mentioned by Jahángír in his memoirs as having distinguished himself in the war with Khusru.[1] Sayyid Alam settled in Kheri Sarái, and his grandson, Hizabr Khán, founded Tisang. Sayyid Sálim settled at Mahmúdpur in the Meerut district, but his family is now decayed. Sayyid Shujáat Khán appears to have been the son of Sayyid Jahángír, who was son of Sayyid Mahmúd. Sayyid Jahángír attained to high command in Dehli and received a grant of land "*az gang ba Tisang.*" He also obtained a grant of lands in Bijnaur and founded Jahánabad, where Shujáat Khán built a famous mosque. His family held the estates until the mutiny, when their possessions were confiscated for rebellion. The existing members are dependent upon their relatives of Tisang. Sayyid Báyazíd, who served during Akbar's reign in Gujrát, is mentioned by Mr. Blochmann as probably belonging to this family. In Sháhjahán's reign he was made a commander of 2,000, and had previously received the title of Mustafa Khán. Sayyid Chhaju, who died in 967H. (1559 A.D.) and was buried at Majhera, is also said to have been a brother of Mahmúd, but his name does not appear in the local list. Besides these, several Sayyids are mentioned amongst the grandees of the Mughal court whose families cannot now be traced out, such as Sayyid Lál, who served in Gujrát and the Dakhin,[2] and others.

Present state of the Kúndliwáls.

The Kúndliwáls are at present distributed amongst the villages of Majhera, Háshimpur, Tisang, Bálipura and Tándera. They are for the most part very illiterate, and many of them earn their livelihood by manual labour. Some, however, have obtained high appointments under Government. Thus Sayyid Imdád Husain is a tahsíldár and was rewarded with the gift of Jaula in proprietary right on account of services rendered during the mutiny. Sayyid Ghulám Husain of Bálipura is also a well-to-do proprietor. Majhera, however, bears all the appearance of a village decaying

[1] Dowson's Elliot, VI., 273. [2] Aín, I., 526.

beyond remedy. Sayyid Alam perished with prince Shuja in Arakan, and Mr. Blochmann notices that of the twenty-two companions of that unfortunate prince ten were Bárha Sayyids. Branches of the Kúndliwál family are established at Maiman in the Meerut district, and across the Ganges in Chandpur and Jahánabad in the Bijnaur district. As a clan, they have almost become extinct since 1760, when the few who did not perish by famine and the Marhatta sword emigrated to Oudh.[1]

Chhatrauri branch.

The first place of residence of the Chhatbanúri or Chhatrauri branch was close to Sambalhera. One of them called Sayyid Hasan Fakhr-uddín lived in the reign of Akbar and must have had some influence at court, for he was able to procure for his friend, the Raja of Sambalhera, the confirmation of that dignity in the male line to the Raja's son Rám Chand. Rám Chand succeeded his father, and on his death without children the Sayyid procured the succession for Rám Chand's widow. She was so pleased with his conduct that she made over as a gift to Sayyid Hasan the whole of her property, and on receiving the sanction of the imperial court the Sayyid took possession of Sambalhera and the adjoining estates. Another branch of the same family is settled at Tisha. Sayyid Husain had four sons: (1) Sayyid Sher Ali, who died without issue; (2) Sayyid Ahmad, killed in the war with Ratan Sen of Chítor, and one of whose descendants settled in Kailawadha, and another, Roshan Ali Khán, served under Muhammad Shah; (3) Sayyid Táj-uddín, whose son, Sayyid Umar, founded Kakrauli and colonised Rauli Nagla and Bera, where many of his descendants reside to the present day and are of some importance; and (4) Sayyid Sálár Auliya. The last left Sambalhera for Kaithora where, in a manner somewhat similar to that adopted by his grandfather, he obtained possession of the village as the adopted son of the owner, a widow. Sayyid Sálár had two sons: (*a*) Sayyid Haidar Khán, whose descendant, Sayyid Kásim Shahámat Khán, settled in Míránpur and founded the Haidar Kháni family; and (*b*) Sayyid Muhammad Khán, whose descendants remained at Kaithora and form the Muhammad Kháni family. Members of the Haidar Kháni family are still found in the villages of Míránpur, Gadla and Bhúpa, and some of them are in the service of Government in positions of trust. Of those that remained at Kaithora, Sayyid Nusrat Yár Khán and Rukn-ud-daula attained to high rank during the reign of Muhammad Shah as governors of Gujrát, Agra, and Patna. They held twenty-eight villages in *jágír* in Ahmadabad, which remained in possession of the family until 1850. These grants were made in return for their services against their brethren of the Tihanpuri branch, which resulted in almost the annihilation of the latter. The descendants of Sayyid Shahámat Khán are the

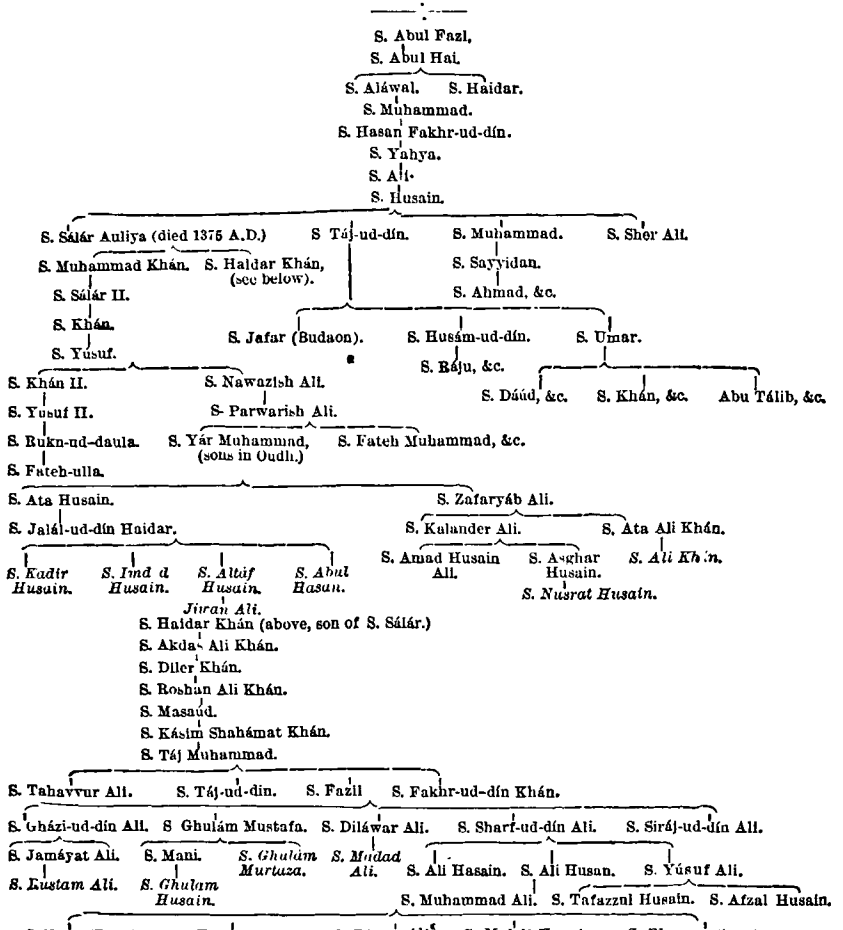
[1] The tomb of Mírán Sayyid Husain at Majhera bears the following inscription :—

"1. O Lord, forgive our sins, for we are sinners and Thou art forgiving.

2. Thou art good, but we are wicked and have committed endless crimes. The date of the death of Mírán Sayyid Husain, the Good, who has obtained pardon and forgiveness, is the 5th Jumáda II., 1002" (9th March 1592).—Blochmann in Proc. As. Soc., Ben., July, 1873, p. 142.

only Bárha Sayyids that still retain the title of Nawáb. The Chhatrauris of Morna in Bhukarheri received grants of land to the west of the Káli in Charthawal which they still retain, whilst their original home in Morna has fallen from a flourishing town to a petty agricultural village. The mosque of Bibi Jhabbu, wife of Nawáb Hasan Khán, who was a Bakhshi during the reign of Muhammad Sháh, is one of the last of the substantial Sayyid buildings in Morna. The inscription on it shows that it was erected in 1725 A.D. at a cost of Rs. 9,000.[1] Besides the tomb of Ibn Sálár already mentioned, another exists at Sambalhera, built by the architect Daswandi in 1631-32 A.D. by order of Sayyid Mákhan, son of Baha-ud-dín. The same architect's name appears on a tomb in Ghálibpur.[2]

Genealogical tree of the Chhatrauri branch of the Bárha Sayyids.



[1] Proc. As. Soc., Ben., July, 1873, p. 142. [2] *Ibid*, 1872, p. 166.

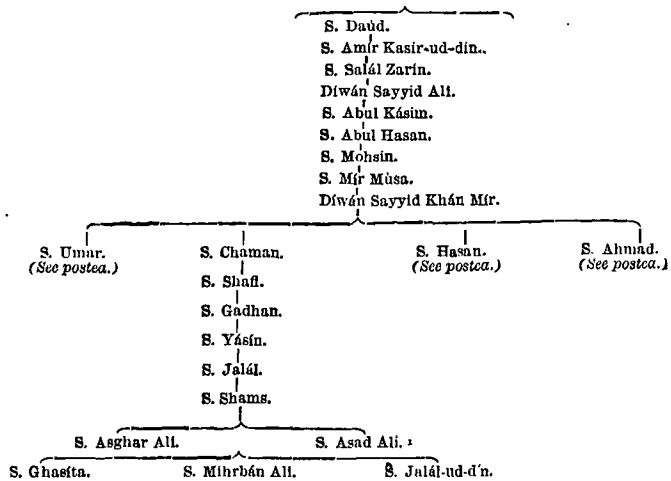
It is possible that the Sayyid Ráju who fell[1] at the siege of Ahmadnagar in 1003 H. (1594 A.D.) is the grandson of Sayyid Táj-ud-dín mentioned above.

Tihanpuri branch.

It is the Tihanpuri branch, however, that has raised the name of the Bárha Sayyids to the highest pitch of eminence. Sayyid Khán Mír,[2] eighth in descent from Sayyid Dáúd, left Tihanpur and settled at Dhásri in parganah Jauli of this district. He had four sons, the eldest of whom was Umar Shahíd, who settled in Jánsath; the second was Sayyid Chaman, who settled in Chhataura or Chitaura; the third was Sayyid Hasan, who settled in Bihári; and the fourth was S. Ahmad, who settled in Kawal, a village in parganah Jánsath. I shall now briefly describe these four branches of the great Tihanpuri stock. Sayyid Chaman's village now lies on the left bank of the Ganges canal in parganah Jánsath. To his family belongs Sayyid Jalál, who took possession of Kharwa Jalálpur in parganah Sardhana of the Meerut district, in the reign of Sháhjahán, and is said to have acquired proprietary rights in a *chaubísi* (24) of villages there. The village of Chhataura was enlarged by Sayyid Muhammad Saláh Khán, but Sayyid Shams, the son of Sayyid Jalál, leaving the imperial service, the family declined. Sayyid Shams had two sons, Sayyid Asghar Ali and Sayyid Asad Ali, the former of whom died without issue, and the descendants of the latter reside in Chhataura and Jalálpur. They are all in very reduced circumstances, and the Chhataura family were obliged, in 1843-44, to sell the bricks of the ruined houses in their village for Rs. 10,000 to Colonel Cautley to build the works on the Ganges canal. They hold only the village of Chhataura, at the present time, in this district, and have not extended their possessions in the Meerut district.

Sayyid Chaman.

Genealogical tree of the Tihanpuri branch of the Bárha Sayyids.



[1] Variously spelled Khwán Fír, Khwán Kír, Khwán Mír, Khín Kír, Khán Mír.

[2] Aín, I., 452.

This tree is not carried any further as the members of the family have so declined in importance.

Sayyid Hasan.

Sayyid Hasan,[1] the third son of Sayyid Khán Mír, emigiated to Bihári, near Sikhara or Síkhrí, in the south-east of parganah Muzaffarnagar. He had six sons : Sayyid Mán and Sayyid Khán, who died without issue ; Sayyid Kutb, Sayyid Yúsuf, Sayyid Sultán, and Sayyid Nasír-ud-dín. The descendants of Sayyid Kutb, the eldest son, still reside in Biláspur and Muzaffarnagar, and the remains of extensive masonry buildings around their present residence show that this family also attained to wealth and distinction in the imperial service. The Sayyids of Ratheri are descendants of this branch, but the greater number are now either small proprietors, cultivators, or in service. The descendants of Sayyid Yúsuf, the third son of Sayyid Hasan, are found in Bihári and Wahalna. The descendants of Sayyid Sultán, the second son, are very numerous ; many of them are in service and many are petty proprietors, cultivators, and holders of grants of land free of revenue. This subdivision of the family still own Sandhauli, opposite Wahalna, on the Khátauli road in parganah Muzaffarnagar.

Sayyid Khánjahán.

To the descendants of Sayyid Nasír-ud-dín, the sixth son of Sayyid Hansa, belongs the celebrated Sayyid Khánjahán-i-Sháhjahání who attained to such power under the Emperor Sháhjahán. He received in *jágír*, from his master, forty villages in parganahs Khátauli and Sarwat, and free of revenue in perpetuity ten thousand bíghas of land with the title of Abul Muzaffar Khán. Sarwat was nominally the chief town of his new possessions, but was at that time almost deserted. Sayyid Khánjahán commenced a new town on lands taken from Sujru and Khera, which was completed by his son, who named it Muzaffarnagar in honour of his father. Sayyid Abul Mansúr's name is still preserved in the name of the village of Mansúrpur, and the descendants of Sherzamán Khán, *alias* Muzaffar Khán, his brother, are still to be found in the Abupura muhalla of Muzaffarnagar. Mr. Blochmann gives the following tree of Sayyid Khán Jahán's descendants which agrees very well with the local list :—

S. Khánjahán. — a brother.

(1.) S. Mansúr. (2.) S. Sherzamán. (3.) S. Munawwar Lashkar Khan. (1.) S. Ali.

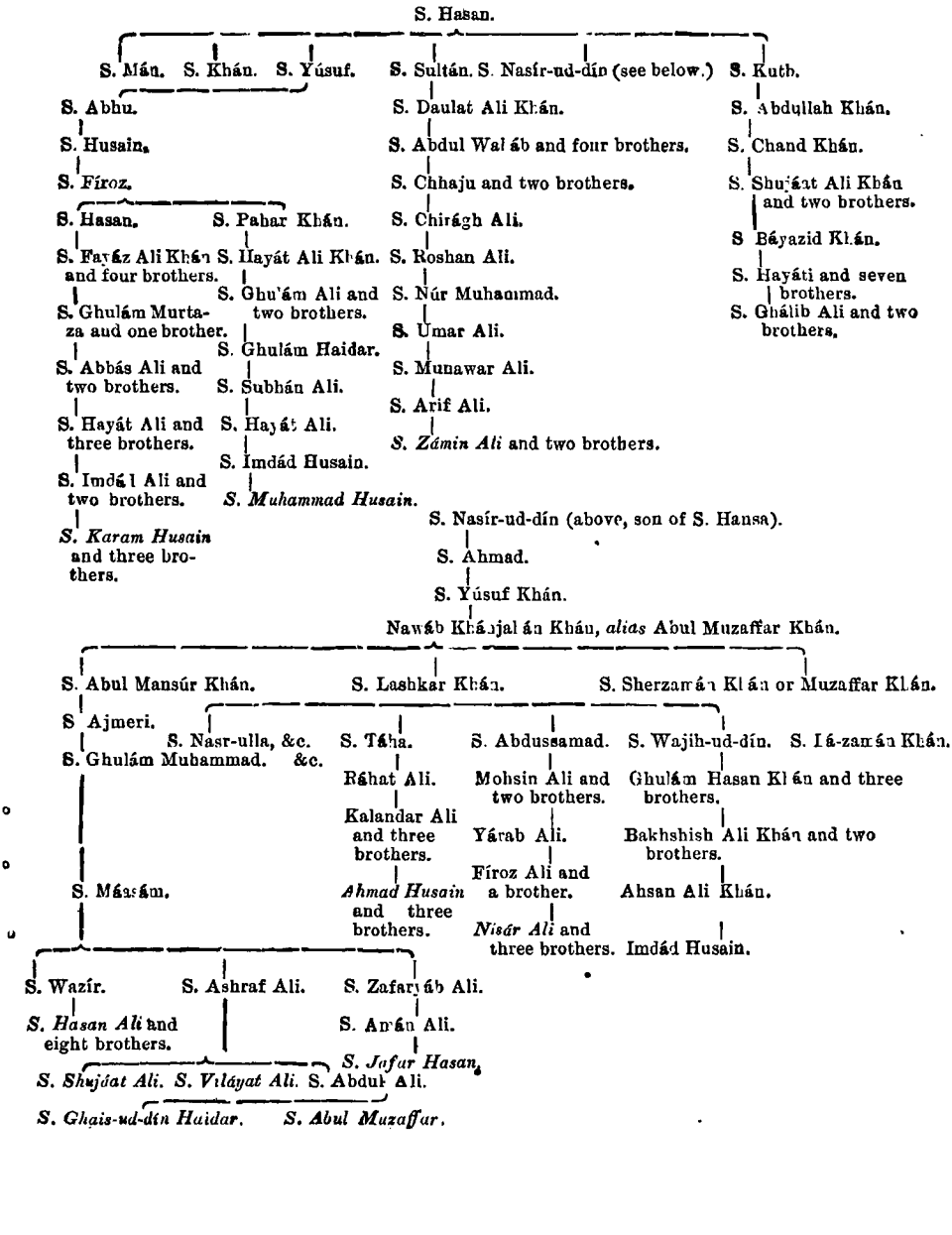
S. Wajíhuddín Khán. (2.) S. Fíroz Ikhtísas Khán (died 1077 H.).

Sayyid Khánjahán died in 1055 H. (1645 A.D.) Most of the revenue-free lands still remain in the possession of his descendants. At Mr. Thornton's settlement in 1841 the Muzaffarnagar parganah contained sixty-four villages, most of which belonged to Sayyids. The Sayyids have lost in this parganah alone between 1841 and 1861 upward of 13,373 acres. As a rule, they have

[1] In some lists written 'Hansa.'

been extremely improvident, and were obliged to borrow money from the usurers at a high rate of interest; the time of reckoning came upon them unexpectedly, and unable to pay, their estates were sold by auction in satisfaction of decrees of the civil court.

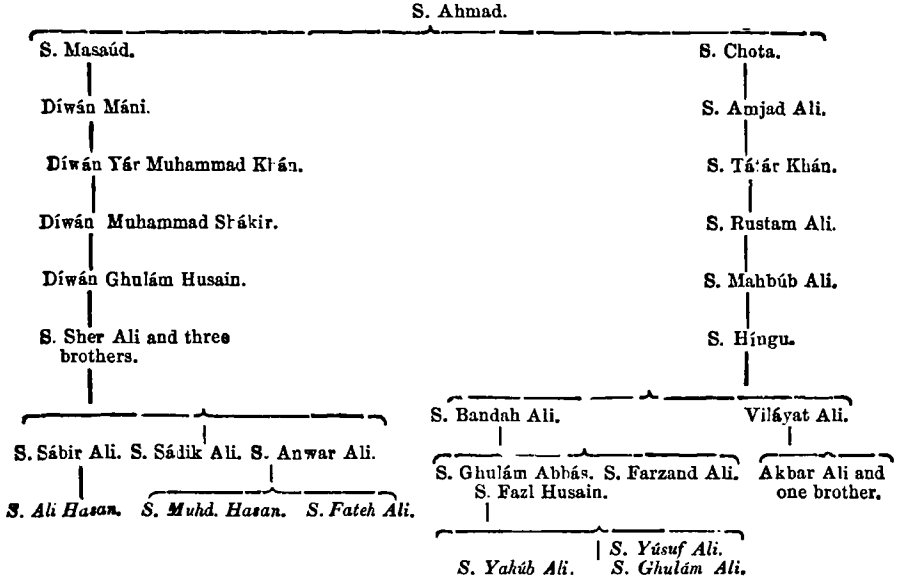
Genealogical tree of the family of Sayyid Hasan of the Tihanpuri branch of the Bārha Sayyids.



Sayyid Ahmad.

Sayyid Ahmad, the fourth son of Sayyid Khán Mír, settled in Kawal, where his descendants still reside and are persons of some importance. Tátár Khán and Díwán Yár Muhammad Khán of this family distinguished themselves in the service of Aurangzeb. There are many Sayyids mentioned[1] by Mr. Blochmann in his notes to the *Aín-i-Akbari*, whose names agree with those in the local lists, but without the details, which are not given, it is impossible to identify them. Altogether the descendants of Sayyid Hasan have not fared well. The chief Mansúrpur branch, involved even before 1841, has gone steadily to ruin. The Ghálibpur and Kailawadha Sayyids have, also, succumbed more or less to the money-lenders. Those of Khánjahánpur, however, have preserved five villages, and those of Sarái retain half their ancestral property.

Genealogical tree of the family of Sayyid Ahmad of the Tihanpuri Branch of the Bárha Sayyids.

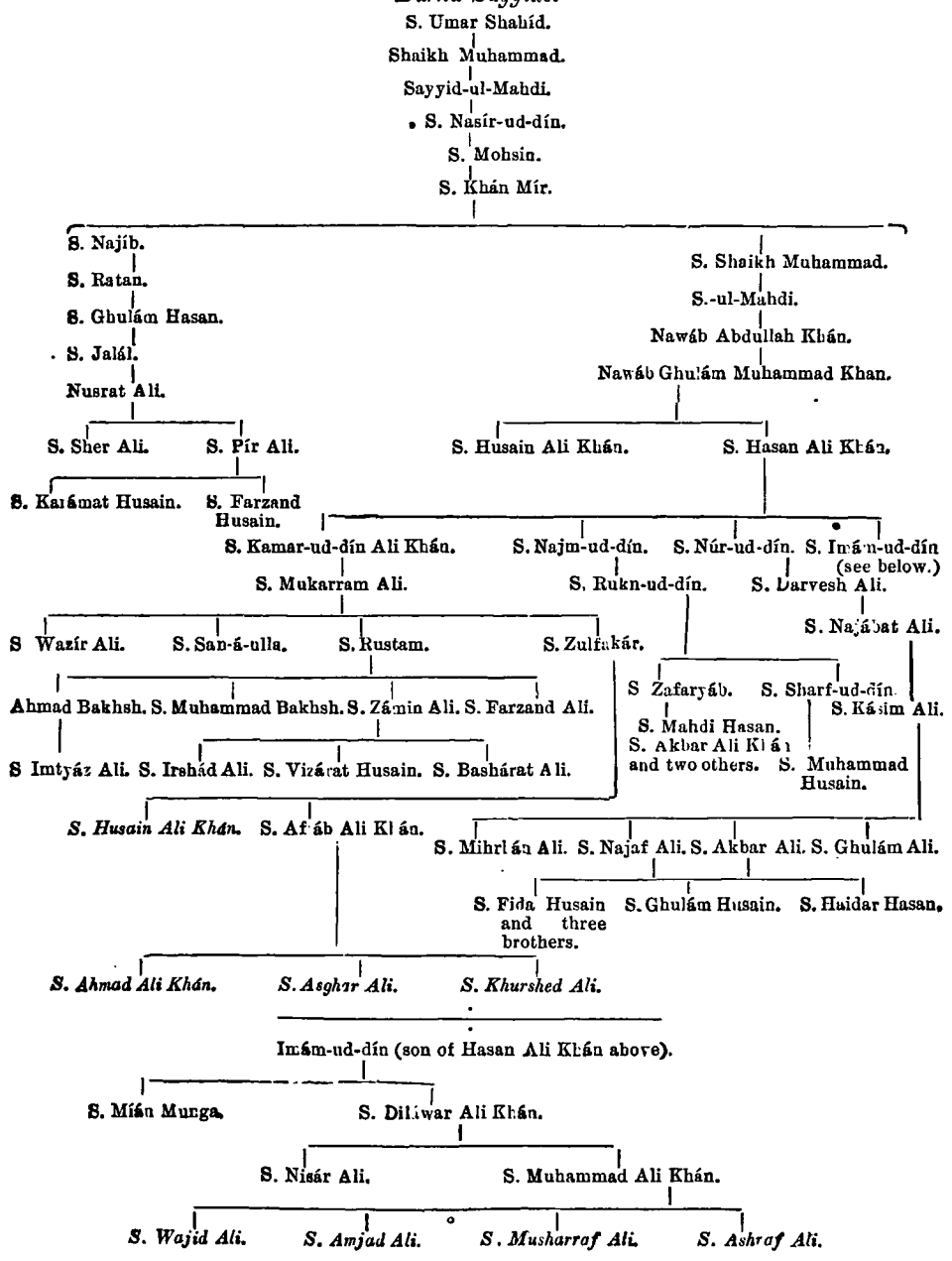


Sayyid Umar.

We next come to the descendants of Sayyid Umar, the eldest son of Sayyid Khán Mír. Sayyid Umar settled in Jánsath, a village then inhabited by Játs and Brahmans. His descendants acquired proprietary rights in the village, and during the ascendancy of the family in the reign of Farrukhsiyar, so extended their possessions that they were detached from Jauli and formed into a separate tappa known as Jánsath from the principal town. I shall first give the genealogical tree before proceeding to the history of this family.

[1] Aín, I, 392, and J. A. S., Ben., XI., 261.

Genealogical tree of the family of Sayyid Umar of the Tihanpuri branch of the Bárha Sayyids.



From this family came the celebrated Nawáb Abdullah Khán, so well known in Ajmer under the name of Sayyid Mián. Mr. Blochmann differs from the local lists and gives five sons to Sayyid Abdullah Khán: (1) Sayyid Hasan Ali Khán, known by his title as Kutb-ul-mulk, Sayyid Abdullah Khán; (2) Sayyid Saif-ud-dín Husain Ali Khán, not mentioned in the list; (3) Sayyid Husain Ali, Khán known by his title as Amír-ul-mamálik; (4) Sayyid Najm-ud-dín Ali Khán, the son of Hasan Ali Khán according to the list; and (5) Núr-ud-dín Ali Khán, also the son of Hasan Ali Khán according to the list. Towards the close of Aurangzeb's reign the Tihanpuri branch of the Bárha Sayyids attained to considerable influence and were entrusted with important commands. Sayyid Hasan Ali and Sayyid Husain Ali were in the employment of Azím-ush-shán, son of Muizz-ud-dín, who was afterwards known as the Emperor Bahádur Sháh,[1] and for their gallantry at the battle of Agra, in 1707 A.D., which gave the throne to the father of their patron, the former received the government of Allahabad and the latter that of Patna.

Rise of the Jánsath family.

In 1709 A.D. we find Sayyid Ahmad, Sayyid Khán, Sayyid Husain Khán, and Sayyid Ghairat Khán, all from Bárha, fighting boldly for the emperor against the Hindu princes on the Narbada who had taken the opportunity to revolt. The Sayyids, true to the reputation of their family, fought in the van of the army and perished to a man with all their followers. During the next few years the Bárha Sayyids distinguished themselves in the Panjáb, along the Indus and in Gujrát, until the time came when by their aid the Jánsath family became masters of Hindustán. The year 1712 found the Sayyid governors distrustful of the power of their enemies at the Dehli court, and they at length resolved to raise prince Farrukhsiyar to the throne. In this design they were successful, and, as his ministers, enjoyed the highest dignities that the emperor could confer. They did not, however, attain their object without much hard fighting, and in the battles of Allahabad and Agra, which then took place, many of their relatives and clansmen lost their lives. Najm-ud-dín Ali Khán, Núr-ud-dín Ali Khán, and Saif-ud-dín Ali Khán greatly distinguished themselves, and Núr-ud-dín lost his life at Allahabad. Sayyid Hasan Ali Khán, henceforward known as Sayyid Abdullah, was appointed vazír of the empire with the title of Kutb-ul-mulk, and Sayyid Husain Ali became commander-in-chief with the title of Amír-ul-mamálik. Their subsequent career belongs to general history and has been sufficiently noticed in the introduction to the history of the Meerut division. Sayyid Husain Ali Khán was assassinated in 1721 A.D., and his brother Sayyid Abdullah was poisoned three years afterwards. Many of the Sayyids of note fell with Sayyid Husain Ali in 1721, and still more perished in the unfortunate battle of Husainpur when Sayyid Abdullah was taken prisoner. Still some survived, and amongst those mentioned as holding high commands at

[1] Siyar-ul-mutakhkharín, 22, 52, 63, 65,403.

this time I find the names of Sayyid Asad-ullah, Sayyid Ján-nisár Khán, Sayyid Ikhlás Khan, Sayyid Asad Ali Khán the lame, Sayyid Diláwar Khán, and Sayyid Fíroz Ali Khán. The estates of both brothers were conferred on one Muhammad Amín Khán, who lost no time in enforcing his authority in this district. At the same time Kamar-ud-dín Khán succeeded to the dignities formerly held by the Sayyids, and ever remained the bitter, active and unscrupulous enemy of their race.

Intrigues of Kamar uddín Khán.

On the death of Sayyid Abdullah in 1724 A.D., Sayyid Najm-ud-dín Ali Khán, his youngest surviving brother, obtained for some time honourable employment under Sarbaland Khán, governor of Gujrát, and subsequently shared in the unmerited misfortunes which befell his patron. At the same time other members of the family continued to serve with distinction in various parts of the empire. Kamar-ud-dín became alarmed at their reputation, and seeing that "the snake was scotched and not killed," resolved to take such measures, on the first opportunity that presented itself, that the very name of Bárha Sayyid should be completely obliterated from the records of the state. In this resolve he seems to have been actuated as much by religious feelings as by hereditary hatred; he was a Sunni, whilst the great mass of the Sayyids were Shiahs. The vazír, for a long time, confined himself to denying them all employments near the emperor's person until, at last in 1737, finding his efforts not so successful as he had supposed, he carried his long-cherished plan into execution. Sayyid Saif-ud-dín Ali Khán, ever since the death of Sayyid Abdullah, had resided, in retirement, on the family estates at Jánsath, and the vazír determined to provoke him to some apparently overt act of rebellion so as to give some colour to the action that he intended to take. For this purpose one Marhamat Khán was despatched to the Saháranpur district with orders to resume the *jágír* of Sayyid Saif-ud-dín and those of every other member of the family of the late Sayyid leaders and their dependents. Marhamat Khán was a man of coarse and brutal manners and undertook the office of jackal with alacrity. In carrying out his orders with an organised 'crowbar brigade' he acted with such unnecessary violence and cruelty that the Sayyids rose *en masse* and put him and his followers to death. Kamar-ud-dín, delighted at the intelligence, and thinking it a good excuse for destroying his enemies, root and branch, assembled a large force of Turánis, a body of Afgháns under Ali Muhammad, Rohilla, besides contingents from the governors of Katehir, Sháhjahánpur, and Shahabad, and a large body of Chhatrauri Sayyids, all of whom he placed under the command of his own brother Azím-ullah Khán, a name then, as in 1857, associated with deeds of cruel murder and rapine.

Sack of Jánsath.

The vazír's force marched on Jánsath, the head-quarters of the Tihanpuri Sayyids, and defeated Sayyid Saif-ud-dín at Bhainsi on the Khátauli road. The town was then surrounded

and taken by assault, and for three whole days nought but rapine accompanied with murder and rape prevailed. The Rohilla leader distinguished himself in the battle by killing Sayyid Saif-ud-dín with his own hand, and received substantial favours in reward besides permission to use the great drum with his forces. The resumption orders were now carried out with the greatest vigour, and many of the Sayyids emigrated to Lucknow, Bareilly, Aonla, and Nagína. A branch of the Jánsath Sayyids is said to exist in Purniah in Bengal, and the descendants of the celebrated *pír*, Sayyid Abdullah Kirmáni of Birbhúm claim relationship with the Sayyids of this district. For some time the Chhatrauris reaped the reward of their desertion, but with the building of the fort of Shukartár, near their principal town of Morna, troubles came upon them also. The Patháns, too, in every way sought to undermine the influence of the remnant of the Sayyid aristocracy, and with the aid of the Gújar chiefs of Bahsúma on the south and Landhaura on the north effectually prevented any coalition of the Sayyids amongst themselves. These chiefs, and even the Ját and Rajpút communities, made common cause against the old state grantees. Púr Chhapár on the north and Bhukarheri on the east fell into the hands of the Landhaura chief, whilst Bhúma, Khátauli, and Jánsath were occupied by the Bahsúma chief, and where the Gújars did not claim any supremacy, the village communities themselves declared their independence or became vassals of the Pathán chief. To the south-west a Rajpút leader received a cluster of villages from Zábita Khán, and many of these had formerly belonged to the Sayyids.

Decay of the Sayyids.

The ancestor of the Nawáb of Karnál received three parganas in *jágír*, including Muzaffarnagar and the estates formerly held by the descendants of Sayyid Khánjahán, and no matter who lost or won, the Sayyids seem to have always been on the losing side. What limited rights they preserved were held by them as the vassals of whatever power might, for the time being, be strongest, whether Imperial, Afghán, Marhatta, or eventually the British. There was little change amongst the village communities, who all through retained their old position intact, and in those cases, too, where the Sayyid settlements had approached the status of a village brotherhood their possession was acknowledged. The famine of 1783 A.D. was severely felt in this district, and for the next twenty years, in common with the other districts of the Upper Duáb, Muzaffarnagar became the prey of marauding bodies of Sikhs and Rohillas. This state of things continued for the first two years of British rule when troops could ill be spared even for the protection of the district and the security of the revenue. Mr. Guthrie, the collector, was often obliged to take refuge in the small mud fort of Fazlgarh "with no other force than a few *najíbs*," and it was not until the beginning of 1805 that Colonel Burn was able to clear the district of marauders (see Shámli).

Sikh raids.

Leaving the Sayyid history at the conquest, I must briefly review the Sikh raids into the district, as they exercised no inconsiderable influence on its fortunes. The first great invasion took place under the ferocious Bandu in 1710 A.D., when Jalál-ud-dín of Jalálabad was *faujdár* of the Saháranpur circle. The Sikh hordes after plundering and burning the towns of Bahat, Saháranpur, Ambahta and Nánauta in the Saháranpur district, penetrated southwards as far as the northern parganahs of Muzaffarnagar. The *faujdár* and his two nephews perished in a vain attempt to oppose the marauders. The latter had in the Gújars important allies, who gladly embraced the opportunity now afforded them to resist and throw off the yoke imposed by their Musalmán rulers. Community of hatred and in some sense of religion made them ready to aid the Sikhs to supplant the existing power, but, perhaps, in rendering this assistance they were as much guided by their hereditary and instinctive love of plunder and a desire to save their own villages as by any other motive. They have always been found on the side of disorder, and until they become weaned from the roving, semi-nomad life that they have been accustomed to lead for generations, they will always rise to the surface when the reins of administration have been slackened and they think that plunder and murder can be indulged in with impunity. But as long as the Gújar knows that the Government is strong and willing to protect its subjects, so long will he remain satisfied with his hereditary occupation of cattle-stealing and cattle-grazing. Should evil days ever unfortunately arise, the Gújar tracts will, as they have always done, prove a very thorn in the side of the district officer and demand all his care and attention to manage them.

Sikhs in 1763 A. D.

The death of Bandu and the dispersion of his followers freed the district for over half a century from the incursions of the Sikhs, but after the battle of Pánipat they again commenced their plundering expeditions. In 1763 A.D. an immense force crossed the Jumna, and after sacking Saháranpur, attacked and plundered the Sayyid town of Míránpur in parganah Bhukarheri. In the following year the same town suffered severely at the hands of the "Budha dal," the name by which the newly organised forces of the Sikhs was known. From the Siwáliks on the north almost to Meerut on the south, and even across the Ganges to Bijnaur on the east, the entire country fell a prey to the army of the Sikh theocracy and its Gújar allies, and village after village was plundered and burned, the inhabitants were slaughtered, the crops were destroyed, and the cattle were carried off. Although the Rohillas under Háfiz Rahmat Khán attempted some reprisals, their efforts were fruitless, and Najíb-ud-daula, the natural guardian of the district, was absent at Dehli, so that the Sikhs, satiated with plunder, were able to retire leisurely to their own country. For three years there was some appearance of rest, but in May, 1767 A.D.,

1767 A.D.

the Sikhs again came, increaased in numbers, improved in organisation, and more confident from success. Sweeping down by unfortunate Nánauta, they harried the whole of the Bárha settlements. Meerut itself was attacked, and were it not for a timely diversion of a few Afghán detachments, could scarcely have held out. The Sikhs retreated north-wards and were pursued, and in a battle fought between Kairána and Shámli in this district the imperial troops were victorious; but hardly had the latter reached Dehli when the Sikhs were again over the border. Nánauta was again burned, and all the way down to Kándhla nothing was seen but smoking heaps of ashes where prosperous villages once stood. Najíb Khán, now relieved from the presence of his enemies at Dehli, took the field and succeeded in clearing the district of marauders, and eventually drove them back by Nánauta and Islámnagar to the ghát on the Jumna.

Black-mal.

But this was his last success; for henceforth, writes[1] Mr. Williams, "as regularly as the crops were cut, the border chieftains crossed over and levied black-mail from almost every village in the most systematic manner. Their requisitions were termed '*ráki*,' and sometimes euphemistically '*kambli*' or 'blanket-money.' Each of them had a certain well-known beat or circle so well recognised and so clearly defined that it is not unusual for the peasantry, at the present day, to speak of some places being, for instance, in Jodh Singh's *patti*, others in Díwán Singh's, or Himmat Singh's, and so on. The collections, of course, varied with the ability of the people to pay, averaging from Rs. 2 to Rs. 5 a head. Two or three horsemen generally sufficed to collect them, for two or three thousand more were never very far off. In case of delay about paying up, a handful of troopers, each well mounted and armed with a spear, sword and a good matchlock, speedily appeared to accelerate the liquidation of the debt. The Sikh's endurance and rapidity of movement were quite commensurate with his rapacity, enabling him to baffle, if not delay, superior numbers. With the exception of beef he had, it is true, no objection to a generous diet of fish, flesh or fowl, and he thoroughly enjoyed his liquor; but, at a pinch, he could march some twenty or thirty miles a day on no better fare than a little parched gram washed down with pure cold water. A tent he despised; baggage, in the ordinary sense of the word, he had none, looking to others to provide him with that as well as most other luxuries. Besides his weapons, his whole kit consisted of horse-gear, a few of the very simplest cooking utensils and two blankets, one for himself and one for his faithful steed. These last important items of the Sikh warrior's equipment clearly point to the origin of the term '*kambli*,' for the tax levied on each villager or townsman was, on an average, equal to about the price of a blanket. In spite of the simplicity of his habits, he took a pardonable pride in the adornment of his person and the proper

[1] Cal. Rev., LX., 28.

maintenance of his accoutrements. Like the ancient Spartan, he never failed to carefully comb out and adjust his long hair and beard before the battle, and his white vest contrasting with his scarlet trappings made a fair show as he rode along gallantly to the fight. Although his tactics mainly resolved themselves into a prolonged series of skirmishes conducted after the Parthian fashion, yet in the strife of men contending hand-to-hand he was terrible, though helpless against good artillery. The '*dal*,' fortunately, possessed very few guns and hardly understood the use of them. This deficiency saved the country from complete subjection, a contingency which seemed imminent a few years later."

Subsequent raids.

The people were helpless, and, left to themselves, began the construction of those mud forts which are so characteristic of the state of insecurity of, indeed, nearly the whole Duáb during the latter half of the last century. In 1774 and 1775 formidable invasions again occurred, and in the latter year, Zábita Khán was obliged to purchase the safety of his fortress of Ghausgarh by paying a fine of Rs. 50,000. Departing thence, the Sikhs ravaged the Sayyid country and plundered Míránpur and Kaithora, where the Sayyids, Sháhámat Khán and Fatehullah Khán, made some slight resistence. The Sikhs then passed through Shámlí, Kairána, Kándhla and Meerut, and then again turned westwards. Dispirited by the success of his enemies at court, and despairing of being able to take the field against the Sikh invaders unaided, Zábita Khán turned his attention towards forming an alliance with them against their common enemy, the court faction at Dehli. Uniting their forces, the Sikh and the Rohilla leader marched down the Duáb and were met by the imperial forces near Budhána; retreating thence to Baghra and again to Amírnagar, the allied forces suddenly turned round and attacked the imperialists, who were routed with great slaughter in March 1776 A.D. Kásim Ali Khán, the brother of Majad-ud-daula, díwán of the empire, fell in this battle, and the disorganization of the Dehli army was completed: Meerut, Hápur, Sikandra and Khúrja were taken, and even Koil, Atrauli and Kásganj were visited by the invaders. Francklin says that Zábita Khán was so pleased with his new allies that he renounced Islám and became a follower of Nának, under the name [1] "Dharam Singh," and Mr. Williams attributes to this circumstance the proverb still current in the district:—

"*Ek guru ke do chela, ádha Sikh ádha Ruhelá.*"

Najaf Khán opposes the Sikh-Rohilla confederacy.

Najaf Khán was summoned from the Ját country, and after a bloody battle was fought between Amírnagar and Ghausgarh, succeeded in driving the Sikhs and Rohillas across the Jumna. After a time, he induced Zábita Khán to come to an understanding with the emperor, and caused him to be restored to

[1] Cunningham, 117.

all his previous dignities. But in doing so both parties forgot to consult the Sikhs, who henceforth regarded their former ally as a renegade, and made his possessions again the scene of the same rapine and destruction that had marked their earlier irruptions. From 1778 to 1781 every year saw the plundering hordes across the Jumna, and in August of the latter year Meerut was again besieged. Fortunately Mirza Muhammad Shafi was able to oppose them here with a considerable force, and having succeeded in defeating the whole Sikh army with great slaughter, and in driving them out of the Duáb, carried the war into their own country.[1]

1783-88 A.D.

During the terrible famine year of the *chalísa* (1840 S., 1783 A.D.,) the Sikhs under Baghel Singh, Krora Singhia, occupied the upper Duáb as far as the Ganges, and even swept round by Hardwár through the Dehra Dún. These incursions alarmed even the English in Calcutta, and in 1784 Major Brown was sent on a deputation to Sháh Alam by the Supreme Council. His mission is thus described by Francklin[2]:—"The real cause of Major Brown's arrival, was in consequence of orders he had received from his Government, not to decline any overture that might be made for affording a military aid to the royal cause. The Sikhs had for several years back, by their predatory incursions into the Duáb and Rohilkhand, excited alarm in the government of Asaf-ud-daula, and Mr. Hastings, the British Governor, with his usual discernment, deemed the exertions of the court at Dehli might, at the present juncture of affairs, prove a beneficial counterpoise to the rising power of the Sikhs." The flight of Mirza Jawán Bakht to Lucknow prevented any overtures being made, and the Sikhs were again left to themselves. In the following year Jassa Singh Ramgarhia and other chiefs, including Rái Singh Bhangi, and his nephew Sher Singh, Jodh Singh of Chachrauli and Sáhib Singh of Ladwa, marched straight through the Duáb, sacking Mírápur on their way, and finally crossing the Ganges, plundered Rohilkhand as far as Chandausi in the Moradabad district. Cunningham[3] writes:—"At this period Zábita Khán was almost confined to the walls of his fort of Ghausgarh, and the hill Raja of Garhwál, whose ancestor had received Dára as a refugee in defiance of Aurangzeb, had been rendered tributary, equally with all his brother Rajpúts, in the lower hills westward to the Chináb. The Sikhs were predominant from the frontiers of Oudh to the Indus, and the traveller Forster amusingly describes the alarm caused to a little chief and his people by the appearance of *two* Sikh horsemen under the walls of their fort, and the assiduous services and respectful attention which the like number of troopers met with from the local authorities of Garhwál and from the assembled wayfarers at a place of public reception." In 1788 A.D. the year of his deposition and death, Ghulám Kádir defeated a force of Sikhs who, after sacking Ambahta, were marching southwards through Muzaffarnagar.

[1] Shah-Aulum, 94. [2] *Ibid*, 115. [3] Cunningham's Sikhs, 117

The Marhattas make terms with the Sikhs.

After the capture of Meerut and the execution of Ghulám Kádir in 1788, the Marhattas marched northwards through the Duáb and annexed the northern districts, of which Ghani Bahádur of Banda[1] became the first governor. Temporising with the Sikhs, he allowed many of their leaders to hold portions of this and the Saháranpur district partly as farmers and partly in lieu of the uncertain dues that they were accustomed to levy.[2] Thus in 1790 A.D., Rái Singh of Jagádri and Sher Singh of Burhiya took possession of portions of the *mukarari* of the Gújar Raja of Landhaura, comprising parganahs Manglaur, Jaurási and Jawálapur in the Saháranpur district, but were obliged to give them up in the following year by the new governor, Bhairon Pant Tántiya. Both still held, for some time, portions of the Sultánpur parganah, whilst Rái Singh occupied Nakúr. In this district Gurdat Singh of Ladwa obtained parganahs Jhanjhána, Kándhla and Shámli and held them with Karnál for twelve years. Bhanga Singh, also, acquired Bidauli and Kairána, and all agreed to protect the Duáb from the attacks of the other Sikh chiefs. But, relieved of their great enemies, the Sikh confederation fell to pieces, and chief began to attack chief and aggrandise himself at the expense of his co-religionists. Nakúr itself, though held by Rái Singh, was attacked by Díwán Singh and plundered. The former appealed to the Marhattas, who had already begun to levy tribute from Patiála and other states in Sarhind, when the death of Sindhia himself put an end to any aggressive attempts on the part of his followers.

State of the country in 1794 A.D.

On the death of Madhoji Sindhia in 1794 A.D., the Sikhs across the Jumna, already jealous of their brethren who received grants in the Duáb, were ready for further raids. Daulat Ráo Sindhia with eight battalions of disciplined troops was at Poona, De Boigne was at Aligarh, the Begam Sumru was at Sardhana, and Appa Khandi Rao with George Thomas[3] was in Mewat. Profiting by the disorders of the time, the Sikhs again invaded the Duáb in 1795 A.D., and succeeded in driving the Marhatta garrison from Saháranpur. The fugitives took shelter in the fort of Jalálabad and would not have escaped their enemies had not George Thomas appeared with a portion of his Mewat force and relieved them. Thomas was then appointed 'warden of the marches' by Lakhwa Dáda, who had succeeded to the Marhatta command in Saháranpur, and was given charge of 2,000 infantry, 200 cavalry and sixteen pieces of artillery raised for the protection of the Jumna frontier, and was assigned the parganahs of Pánipat, Sonpat, and Karnál for their pay. Thomas, however, found his task no easy one. Although Bápu Sindhia exerted himself during 1796 to restore some appearance of order, the Sikh *jágírdárs* were found to be intriguing with their brethren in the Panjáb. The Sikh commandant of Shámli, then in Gurdat Singh's *jágír*, was detected in a

[1] Gazetteer, I., 32. [2] Mr. G. Williams ie Cal. Rev., LXI., 42. [3] See Gazetteer, II., 25

treasonable correspondence; his fort was attacked by Thomas, was taken, and the entire garrison fell by the sword. Thomas then hastened northwards to assist Bápu Sindhia, who was engaged in investing the Túrkmán fort of Lakhnauti, then held by Bahrmand Ali Khán, and here also, he and his forces distinguished themselves and contributed, in no small measure, to the ultimate success of the Marhata troops. Crossing the Jumna, Thomas defeated the Sikh confederates in four successive actions near Karnál, but finding Perron, who had succeeded De Boigne, inimical to his success, Thomas left the Duáb for Mewat, still, however, continuing his operations against the Sikhs. He repaired the walls of Hánsi, cast guns, erected manufactories for small-arms and powder, and enrolled large numbers of horse and foot, with which he levied contributions on the neighbouring Sikh States. We next hear of the Sikhs as allies[1] of Sambunáth, the Baniya agent of Imám Bakhsh, governor of Saháranpur. They joined him in his revolt against Perron and were present at the battle of Khátauli, early in 1800, in which Sambunáth's six battalions were defeated by three of Perron's battalions with the loss of six guns. About the same time Thomas attacked Jhínd, belonging to Bhág Singh of the Phulkia confederacy. The town was relieved by the old chief,[2] Baghel Singh Krora Singhia and the sister of the Patiála Raja, but they failed to injure Thomas in his retreat to Hánsi. Early in 1800 Thomas took Fatehabad and reduced the Bhattis of Hariána to submission, while the Patháns of Maler Kotla and the converted Musalmáns of Ráikot, also, acknowledged him as master. In all quarters he spread his influence and compelled submission to his authority and made those whose own will had, hitherto, been their sole law, obey his slightest command. The Sikhs were not more successful in the Duáb, they and their employer Sambunáth were again defeated in August, 1800, with the loss of all their baggage and twenty-four pieces of cannon. Following up his success Perron resumed nearly all the Sikh *jágírs* with the exception of Jhanjhána, which was still held by Gurdat Singh, and yielded a revenue of Rs. 36,554, and other lands held by Bhág Singh and valued at Rs. 57,968. Kándhla was transferred from the Ladwa chief to Colonel Hessing,[3] and Shámli, with a revenue of Rs. 38,000, was added to Chhaprauli as the *jáyír* of Sháh Nizám-ud-dín, the comptroller of the imperial household and a firm friend of the Marhattas. It was, however, resumed by Perron in the rains of 1801 and included with Bidauli and Kairána in his personal *jágír*.

1799-1800 A.D.

Thomas.

The history of the Sikh in the Duáb during 1801-02 is so intimately connected with Thomas that I must again refer to his history.[4] In 1801 Thomas raised his force to ten battalions of disciplined infantry with sixty pieces of cannon and secured to him-

[1] See Gazetteer, II., 252. [2] Cunningham, 123. [3] Collr., Meerut, 21st May, 1805.
[4] See Gazetteer, II., 101.

self a country yielding three lakhs of revenue a year. With this considerable force he made a bold attempt to besiege Lahore and repeatedly beat the Sikhs who attempted to oppose his progress, and was beyond the Satlaj river, within four marches of Lahore, where he intended to plant his colours and make it the capital of his future empire, when he heard that the vigilant Perron was preparing to attack him. Thomas made a rapid retreat to Hánsi, fighting the Sikh horse who hovered round him, and marching thirty or forty miles a day. "His swift retrograde movement," writes Smith, who was then in the Marhatta service,[1] "astonished Perron, who had hoped to seize Thomas' defenceless country, before he could return to defend it; and who had determined to annihilate Thomas' force or to employ it to forward his own view. With this determination Perron collected ten battalions and two thousand horse and marched from Dehli in August, 1801, to negociate with or to fight Thomas. Perron had previously strengthened his party by alliances with some Sikh chiefs, the political foes of Thomas, who had agreed to assist Perron with money and with cavalry (five lakhs of rupees and ten thousand horse) to exterminate their dangerous neighbour, George Thomas. In August, 1801, the two rival parties approached each other near Bahádurgarh, ten *kos* to the west of Delhi. Thomas also had formed alliances with the Begam Sumru, with the Rajas of Jaipur and Alwar, and with Lafontaine, who commanded six battalions of Filoze's party in the service of Sindhia. Such are the singularity and treachery of eastern politics, that two of Sindhia's brigades, Sumru's and Filoze's, had agreed to assist George Thomas against Daulat Rao's commander-in-chief, Perron."

Negotiations with Thomas.

"I was employed to bring Thomas to terms and to an interview with his rival. Perron offered him sixty thousand rupees a month for his party, the rank of colonel, and the fort of Hánsi, if Thomas would take service with Sindhia and serve under Perron's order. Thomas, to gain time, agreed to Perron's terms, and with some difficulty I brought them to an interview; but they soon became mutually distrustful, and separated to commence hostilities. Perron wished to follow the political axiom '*divide et impera;*' he required Thomas to divide his force by sending four battalions to the assistance of Sindhia; and Thomas was ambitious, his alliances were strong, and Daulat Rao's detachments had just been cut off by the victorious Holkar at Ujjain, and Sindhia had made a precipitate retreat to Burhanpur. The time was propitious to the views of Thomas. Perron had only ten battalions: eight of his battalions: had been ordered to march to the assistance of Sindia, whose affairs wore a gloomy prospect. Thomas wished

[1] I quote from "A Sketch of the rise, progress and termination of the regular corps formed and commanded by Europeans in the service of the Native Princes of India: by Lewis Ferdinand Smith, late Major in Daulat Rao Sindhia's service." Calcutta *circa* 1804, as giving the account of an eye-witness.

to gain time until he could raise six battalions more—the recruits were on the way to join him, the arms were ready, and he desired further to strengthen his alliances. The victorious Holkar had repeatedly written to him to begin hostilities, and he would assist him with money and cavalry—in short, the chances were much in favour of Thomas; but he was a proof that in politics, as well as games, fortune mocks calculation and probability of success. Perron and Thomas were both too cunning to deceive each other long; matters could no longer remain dubious, and a rupture succeeded their hypocritical negotiations."

Perron breaks with Thomas.

"Thomas retreated to Hánsi, and Perron, unwisely, set off for Koil with impolitic precipitation, leaving the war against his enemy to be carried on by Bourquien,[1] who commanded DeBoigne's third brigade and was a Major. Had Thomas acted with his usual prudence, boldness and activity, the forces under Bourquien must have been destroyed; the allies of Thomas would have then thrown off the mask and openly taken his part, and before Perron could have collected another efficient force, Thomas would have been master of Dehli, the king's person, and probably would have extinguished Perron's power and authority; and Sindhia would have quietly transferred that power to Thomas, for he would have been equally indifferent who governed Hindustan, Perron or Thomas, as he must, from his impotency to resist, have bowed to the will and power of every aspiring mind, who commanded large bodies of regular infantry. Hostilities commenced after the retreat of George Thomas and his army and the flight of Perron from his army. I was ordered with three battalions to lay siege to Georgegarh, a small fort, forty *kos* to the eastward of Hánsi. Thomas and his forces were encamped under the fort of Hánsi, and Bourquien was ordered with seven battalions and five thousand horse to lie between me and Hánsi to cover the siege of Georgegarh, which must have fallen in a week; but with singular ignorance, Bourquien encamped at Jín, ten *kos* farther from me than Thomas's army. The consequence was obvious, for three days after I laid siege to Georgegarh, I was attacked by Thomas with eight battalions, compelled to raise the siege and retreat to Jhajhar, four *kos* to the east of Georgegarh. Favoured by the obscurity of night I was not completely cut off, and made good my retreat, with the loss of one gun and one-third of my force killed and wounded. How I escaped total destruction I do not yet know, and why Thomas did not follow my retreat I cannot say; for if he had continued the pursuit I must have lost all my guns, and my party would have been completely destroyed; but Thomas spared me and remained at Georgegarh after raising the siege. I believe he was apprehensive of following me for fear he should be too far from Hánsi, and that Bourquien, in the meantime, would cut off his retreat to his fort; but alarm in his troops, I believe more strongly, to have

[1] This man's real name was Louis Bernard.

been the cause of his strange conduct. The next day, the 28th September, my brother, Captain E. F. Smith, arrived to my assistance with two thousand horse, after performing an astonishing rapid movement of eighty miles in ten hours; but brotherly affection gave impulse to his course, and his example hurried on most of the cavalry. This circumstance prevented Thomas from renewing the attack on me, as he intended, on the 28th September. On the 29th September, 1801, Major Bourquien, with the third brigade, reached Georgegarh, after a surprising march of forty *kos* in thirty-six hours. The brigade arrived about mid-day, but the troops were harrassed, fatigued, and famished. With destructive imbecility, Bourquien ordered the troops, consisting of seven battalions, to storm Thomas's intrenched camp at 4 o'clock in the afternoon. He did not lead the attack himself, but prudently remained with the cavalry two thousand yards in the rear of George Thomas's line. The seven battalions of DeBoigne, with calm intrepidity, advanced with their guns through heavy sand, exposed to a dreadful and well-directed fire of fifty-four pieces of cannon, and attacked Thomas's ten battalions in their intrenchments; but they were repulsed with the severe loss of above one thousand and one hundred men killed and wounded, which was nearly one-third of their number. Their slow progress through the heavy sand which lay in front of Thomas's lines, owing to their guns, which they would not leave in their rear, occasioned not only their defeat, but their dreadful carnage. Thomas's loss was not so great, as the guns of DeBoigne's battalions were mostly dismounted by their recoil on the sand, when fired, which snapped their axle trees.

Defeat of Thomas.

"Among the killed was a very amiable and gallant young officer, Captain E. F. Smith, who commanded the left wing of De Boigne's battalions. Had Thomas taken advantage of Bourquien's ignorance and folly and sallied out on the defeated troops of Perron, he would have overturned his power: but Thomas was in this critical moment confused and confounded, though he had shown feats of valour during the action. Moreover, he had only two European officers to assist his exertions and direct a line of ten battalions, one of whom, the gallant Hopkins, lost his leg, and his native officers had been bribed over to Perron's interest. Fresh forces arriving, and Thomas unable or unwilling to retreat to his fort, was surrounded at Georgegarh: Colonel Pedrons arrived, superseded Bourquien, and blockaded Thomas and his diminished troops. They sustained the blockade for seven weeks, and at last were conquered by famine. The troops came over to Pedrons or dispersed, and Thomas escaped with great difficulty with his European officers, Captain Hearsey and Lieutenant Birch, who adhered to his fallen fortune with commendable inflexibility, to Hánsi, and left his enemy in possession of fifty-four pieces of cannon, his camp and baggage. Pedrons returned to Koil and Bourquien followed Thomas to Hánsi,

stormed the town and laid siege to the fort. The fort of Hánsi has been celebrated in oriental history: it was one of the strongest in India, and above forty thousand Musalmáns lie buried on the circumjacent plain, of the various armies of the faithful who attempted to wrest it from the Hindús. Ala-ud-din Ghori took it six hundred years ago after an eighteen month's siege and the loss of twenty thousand men; but it had been dismantled and lay long neglected, and Thomas had not had sufficient leisure to renew its strength. Moreover, Bourquien had subdued the garrison with gold, which in India is more irresistible than in Europe. In this critical situation I came forward once more to assist Thomas to mitigate the severity of his misfortunes and dissipate the dangers with which he was environed. I advised him to an honourable surrender before the garrison delivered him over to his enemy, with eternal disgrace to themselves and ignominy to him. He followed my council, surrendered the fort on the 1st January, 1802, and with his family and private property was conveyed to the Company's frontiers under my protection. His misfortunes had broke his daring mind and impaired his robust constitution; and the luxuries of Indian tables hurried him to his grave in the end of 1802." Perron and the Sikhs thus, fortunately, got rid of an inveterate foe, and the British lost in Thomas an ally who would have been of much assistance to them in their subsequent wars with the Marhattas.

The conquest.

In November, 1801, the treaty of Lucknow was concluded which gave to the British the Lower and Central Duáb, Gorakhpur, and a great portion of Rohilkhand. This was followed by the treaty of Bassein, which Sindhia considered so injurious to his interests that he, at once, threw all his influence into the scale against the British, and war was declared. General Lake captured the fort of Aligarh in 1803, while Perron, the Marhatta commander, delivered himself up to the English at Muttra. The British marched upon Dehli, and defeating a Sikh contingent under Louis Bourquien expelled the Marhattas, and eventually Muzaffarnagar came into their possession with the remainder of the conquered provinces. A few days after the capture of Dehli Colonel Burn occupied Saháranpur. He had, however, hardly reached it when the Sikhs were again on the border.[1] Lieutenant Birch with a party of najíbs pushed on to watch the fords while reinforcements were asked for from Dehli. Colonel James Skinner with a strong detachment of some 800 irregular horse crossed the Jumna lower down and completely surprised the enemy (February, 1804), routing them with great loss. Posts were, then, established along the Jumna and a battalion of the Begam's from Sardhana occupied Chilkána. But the Sikh sardárs tendered their submission and all was peace for a time. In September, Colonel Ochterlony recalled the troops at Saháranpur to aid in the defence of Dehli, then

[1] Gazetteer, II., 252.

threatened by Holkar's adopted son Harnáth. The entire Duáb rose in their rear, and in October, 1804, Sher Singh of Burhiya and Rái Singh led the last great Sikh expedition across the Jumna by Rájghát opposite Sultánpur, (13th October). The Sikh chiefs were not inclined to give up their claims to *ráki* and *kambli* from the Duáb without a struggle, and, notwithstanding their submission in March, were prepared to take advantage of the opportunity afforded by the advance of Holkar's forces in October to vindicate their alleged rights. They marched down by Damjhera, where a skirmish is said to have taken place, and thence by Chilkána, where the Sayyids offered some feeble resistance. In Sultánpur the house of an old servant of the Sikhs alone escaped destruction, and as they approached Saháranpur, the Collector (Mr. Guthrie) was obliged to shut himself up in the old fort known as the Kila Ahmadabadi with his records and treasure.

Action near Shámli.

Colonel Burn, on hearing of the advance of the Sikhs, set out from Dehli, on the 25th October, with the 2nd battalion, 14th N.I., a battalion of irregulars under Captain Harriott and six guns (one 18-pounder, one 12-pounder and four 6-pounders) and was passing on rapidly to the relief of Saháranpur, when he was overtaken by the Marhatta cavalry near Kándhla. Jaswant Rao Holkár with a large force of horse had escaped from Dehli with the determination of cutting off the small force destined for the relief of Mr. Guthrie. The subsequent fight is thus described from official records by Mr. Williams[1] :—"After a vain attempt to cut his way through the enemy, whose swarms were hourly increasing, Colonel Burn found himself constrained, on the morning of the 30th, to occupy a small mud fort under the very walls of Shámli, a hostile town, which closed its gates against him. The villagers all know the spot well. It was afterwards distinguished by one of the most gallant fights, and one of the most cold-blooded massacres, that ever happened during the mutiny. His situation was, to all appearance, desperate. The detachment amounted to barely 1,500 men, the force beleaguering it to fully 20,000, without counting a reinforcement of Sikhs, and the townspeople showed the same spirit that characterised their conduct in later days, not only intercepting supplies and harbouring the enemy within their walls, but themselves taking an active part in the assault. Their matchlockmen, sheltered by the ramparts, kept up such a deadly fire upon our sepoys in the fort beneath, that they actually did greater execution than Holkar's regulars, putting upwards of one hundred men *hors de combat* before Colonel Burn was relieved by General Lake on the 3rd November. In the interval, the garrison fought with devoted bravery, amid cruel privations. The same cannot be said of the Marhatta host, who vanished at the sight of the dust rising along the Dehli road in advance of the British column.

[1] Cal. Rev., LXI., 53.

The episode curiously illustrates the force of hereditary predisposition. Ghási Rám, the leading Ját zamíndár of the place, was chiefly instrumental in stopping Colonel Burn's supplies and otherwise annoying his forces. His son Mohar Singh, following in the paternal footsteps, was consequently hanged on account of similar achievements during the year 1857. The British commander permitted his troops to burn the town as a punitive measure. This, we are told, had a most wholesome effect in other quarters. For instance, at Thána Bhawan, some twelve miles north, ordinarily a hot-bed of disloyalty, Holkar, whose first impulse seems to have been to effect a junction with the Sikhs in Saháranpur, met with such an unfriendly reception that he changed his mind and doubled back again in a south-easterly direction. Meerut was equally inhospitable, so he continued his flight southward."

Action at Charaon.

Colonel Burn heard at Shámli that one of the Begam's regiments had rescued Mr. Guthrie, who joined the army at Khátauli and accompanied the force to Meerut. As soon as Colonel Burn heard of the fall of Dig, he advanced northwards (18th November) against the Sikhs who had now penetrated as far as Shámli and Ghafúrgarh in parganah Soron. His force consisted of the 2nd battalion, 14th N.I., the 1st battalion of the 21st N. I. under Captain Atkins, one battalion of regular infantry, 2,000 Bahráich horse under Captain Murray, and a few guns. In two days they reached Jaula in parganah Budhána, and thence proceeded to Thána Bhawan, driving out Gurdat Singh of Ladwa, who joined the remainder of the Sikhs at Charaon, on the banks of the Hindan, seven miles west of Deoband. Here the enemy chose a strong position, and supported by the Gújars and Rángar Rajpúts awaited the advance of the British force. On the 24th November the Sikhs were attacked and defeated with considerable loss, but owing to the cowardice displayed by the irregular horse, the fortunes of the day were for a long time doubtful.[1] Sher Singh lost a leg by a cannon-shot, and his old uncle, Rái Singh, led him off the field to die at Burhiya. In spite of their punishment the Sikhs again invaded the district and occupied Thána Bhawan, Rámpur, and the neighbourhood of Deoband. Colonel Burn advanced by Thána Bhawan and attempted to surprise the Sikhs who occupied Thelu near Bhálu in parganah Gangoh, of the Saháranpur district, on the night of the 19th December, 1804, but was unsuccessful; for hearing of the approach of the British the Sikhs fled by Chilkána, across the Jumna. Colonel Burn would have followed them up, but orders were recieved forbidding him to cross the river. Colonel Burn returned to Saháranpur, and early in the following January drove out small parties of Sikhs who had advanced as far as Muzaffarnagar on a purely plundering expedition.

[1] See further Cal. Rev., LXI., 346, for a more detailed account of this action, in which Shaikh Kalan (Gaz., II., 212,253) and Kázi Muhammad Ali of Manglaur distinguished themselves on the side of the British.

During January the troops were employed in suppressing a disturbance which arose in Kándhla. Mr. Williams writes:—"The Játs and Gújars had risen at the instigation of Jaswant Ráo Holkar and massacred several of the Kánúngoi Baniyas, a family abominable to them, because it enjoyed the twofold advantage of holding what were then considered lucrative appointments under Government and of also possessing other facilities for amassing money, which the procedure of the civil courts has since enabled them to accumulate with still greater ease. The Sadíki Shaikhs, the impoverished descendants of Shaikh Imám Haj of Samana, share the credit of having contrived the conspiracy with the Ráizádah Baniyas, speculators less prosperous than the Kánúngois. One Azím, a Musalmán Gújar, supposed at first to have been the ringleader of the insurgents, gave his name to the *emeute*, which is styled the 'Azímgirdi.' Subsequent inquiries shifted the chief blame from his shoulders to those of Langír Gosháin, Mahant of Garh Gosháin, a fort north of Rámpur Kheri, near Kándhla, before which Colonel Burn appeared on the 22nd of January, and, after storming it, hung the Mahant on the spot. Two of his Ját associates, Ráj Karn of Lisárh and Dhan Singh of Harmastpur, fondly imagined that they would get off scot-free by presenting themselves in Mr. Guthrie's kutcherry with an air of injured innocence. Their cunning availed them not, for they were instantly seized and likewise executed, under a military sentence, close to the scene of their exploits."

The Azímgirdi disturbance.

During the early part of February the troops were occupied in assisting in the collection of the land-revenue and in patrolling the Jumna until towards the middle of the month, when news came of the irruption of Amír Kháu. Colonel Burn was then at Tánda, in parganah Chhaprauli of the Meerut district, and Begam Sumru had two battalions and eight guns close by at Kutána, which she at once reinforced with the bulk of her army. Colonel Burn retired by Thána Bhawan to Saháranpur, and there received orders to watch the fords of the Ganges and prevent the Pindáris from crossing. At this time he took advantage of the proffered services of Bhág Singh of Jhínd and Bhái Lál Singh of Kaithal, and leaving Saháranpur under their care marched by Jabarhera, Púr and Tisha to Míránpur, where he was joined by Mr. Guthrie. A small body of the enemy crossed near Shukartár, but soon retired, and Colonel Burn proceeded southwards to Garhmukhtesar while the Collector remained at Míránpur. Towards the end of February, Mr. Guthrie proceeded to Fazlgarh, about seven *kos* from Meerut, and made it his head-quarters. He applied to Colonel Burn for a treasury guard, adding—"I request that it may be understood that I do not apply for a personal guard;" though his recent experience at Saháranpur would have fully supported such an application. The fact is that, at this time, a jealousy sprang up between the military and civil authorities, which showed itself in the former refusing a

Amír Kháu.

personal guard to the Collector, while the latter rendered no assistance in obtaining supplies. The cause of this jealousy appears to have been chiefly due to the Collector siding with and expressing the greatest confidence in the loyalty of the Begam Sumru, whilst Colonel Burn declared that he had good reason to know that she was then intriguing with the Sikhs and Marhattas.

On the 9th March, Gurdat Singh and others again threatened Kándhla, and, on the following day, the native officer at Kairána reported that a body of 4,000 Sikh horse had crossed the Jumna and were plundering in their accustomed manner. It was also said that the Sikhs had received two lakhs of rupees from Holkar to assist Amír Khán. Colonel Burn was beginning a series of reprisals, but was obliged to co-operate with the Rohilkhand forces in the pursuit of the Pindáris. On the 12th March Mr. Guthrie wrote that he hoped to hold out in Fazlgarh with a small local force, some twenty Moradabad provincials and eighty matchlockmen. He had only eight rounds of ammunition per man, but "the enemy," he writes "have no guns, and can only take it by escalade, to attempt which they possess neither courage nor materials." Still, on the 13th March, the Pindáris attacked Hápur close by, and were it not for the determined resistance offered by the tahsíldár, Ibráhím Ali (p. 384), would have captured the place and have effected a junction with the Sikhs. On the 16th, the Sikhs, to the number of 2,000, were in the neighbourhood of Shámli, and Gurdat Singh sent word that he would join the invaders on the 17th. One consequence of this was that Gurdat Singh's *jágír* of Jhanjhána was attached.[1] Raja Ramdayál Singh and the Marhal chief, Muhamdi Khán, were directed to protect the Hardwár fair from the Sikhs, but could send few men, and in consequence many merchants were plundered. On the 17th, true to his word, Gurdat Singh joined the raiders and attacked Thána Bhawan, but the Sikhs were repulsed by the Kázi and lost thirty-five men, killed and wounded in the affair. Colonel Burn was about to proceed after them when a despatch was received from Dehli offering an amnesty to all the Sikh chiefs with the exception of Gurdat Singh (27th March). But the Sikhs did not stay their hands, and, on the 7th April, got as far as Míránpur, and on the following day news was received of their having plundered a number of villages near Khátauli and of straggling parties being seen near Fazlgarh and Meerut. Wherever they went they burned the harvest on the ground, plundered the villages and levied contributions. But, in the meantime, Colonel Burn was making preparations for carrying the war into the enemy's country, and on the 5th April the British forces crossed the Jumna and sat down before Gurdat Singh's fortified town of Karnál. Rái Singh, Mahtáb Singh and others had left the Duáb, while the remaining allies of Gurdat remained about seven *kos* from Fazlgarh, collecting the harvest and threatening Mr. Guthrie,

1805.

1 29th March, 1805.

who said that he could hold the fort for seven days, but had ammunition for no longer time. At this time, intelligence was received of the departure from the Sikh camp of Shahíd Khán, the nominal subahdár of Saháranpur on the part of Holkar, and of a raid by a force from Burhiya, the residence of Sher Singh, who was mortally wounded at Charaon. These Burhiya Sikhs occupied Ghásiuddínnagar, near Saháranpur, which they claimed on an alleged *istimrári* grant which was subsequently disallowed. The fall of Karnál effectually put an end to all Sikh invasions, and though rumours of the approach of a force from Patiála and of Ranjít Singh from Lahore were rife in October, no invasion took place. As a precautionary measure, however, two battalions and eight guns were sent from Sardhana by the Begam to Thána Bhawan, and one battalion with four guns to Meerut, while Colonel Burn occupied Sonpat. The Marhal *jágírs* in Muzaffarnagar and Bhanga Singh's *jágír* in Bidauli were subsequently exchanged for lands west of the Jumna. Nothing now remains to complete this short sketch of local history but the continuation of the account of the Sayyids and a record of the events of the mutiny, with which I shall now conclude.

Sayyids after the conquest.

With the advent of the British, many of the Sayyids who had left the district returned, but many, and, indeed, most of them, had been so long away that they were unable to prove their title to their ancestral lands. The country was certainly at peace and the people were again able to leave the walled towns and attend to the cultivation of the small villages and their outlying hamlets, and henceforth no one had to fear open violence. But a danger awaited the Sayyids, both the returned emigrants and the surviving residents, which, in the words of Mr. Cadell, "was more insidious and more fatal to them than the old one, and when they fell victims to their own extravagance and our revenue procedure, to the civil courts, and the ever watchful money-lender, they had almost reason to regret the days when they were vassals of the Gújar chief or of Marhatta soldiers, and when the lands that remained to them were every now and then being desolated by the march of armies or by Sikh and Rohilla raids." Though the Gújar chiefs still retained,[1] for some years, their vast estates under the name of *mukararis*, the Sayyids werealmost universally acknowledged as proprietors in the tract in which, before the fall of the empire, they had completely established themselves. In some cases the claims of the village communities were strong enough to demand serious consideration, yet, as a rule, the Sayyids were restored and the grounds of the few exceptions can be clearly traced. The Rajpút *mukararidár* retained a few villages to the south-west; the debateable ground of the Bhukarheri village was left with a Ját brotherhood, and here and there the Sayyid rights had succumbed to the Marhattas or the Gújars.

[1] See Saháranpur District, Gazetteer, II, 199. Raja Nain Singh's *mukarari* remained intact until 1808 (see Meerut District) and the Rajpút *mukarari* was exchanged for lands in Karnál.

Effect of the settlements.

The general fiscal history of the district during the earlier settlements has been given on a previous page and under the Saháranpur district, and my intention, here, is only to show how the revenue administration has affected the class that once formed the characteristic element of the population, and incidentally with them the Játs, Gújars, and others. Mr. A. Cadell, in one of his manuscript reports, notes that though the lapse, by the death of the grantees of the great estates held on a fixed revenue *(mukarari)* had the effect of restoring the old Sayyid families, they no longer held by virtue of inheritance only, but in very many cases retained their lands without any defined or tangible ground for their position as proprietors. Most of the *mukararis* were granted to individuals and not to communities, and in deciding upon the pretensions of the respective claimants to the proprietary right there was, on the one hand, a single individual or family, and on the other a large and turbulent body of Sayyids who, with much show of reason, asserted a right to a share in the whole estate. "In fact, until quite recent years, the process of weeding out rightful owners has been going steadily on and many of the largest Sayyid estates have not been acquired by inheritance or even by purchase, but are examples of the survival of the fittest or of the least scrupulous of the large communities. In many cases the ousted owners have been avenged and the spoiler and the spoiled are alike at the mercy of the money-lender, while in others the old quarrel still goes on, and even the most well-meaning and considerate landlords have inherited with their property an amount of inveterate hatred which is always unpleasant, is frequently inconvenient, and is on some occasions dangerous." It is difficult to state with accuracy what rights the old communities enjoyed under their Sayyid masters, but in old papers both before and after the British rule the names of *mukaddams* or headmen were entered with those of the proprietors, and in times of difficulty the persons recorded in these papers were those who were looked to for the fiscal management of the village. At the settlement in 1841, numbers of villages were settled with the cultivating communities, who were "vested with the entire management of their villages; they arranged for the cultivation of the land, had complete control over the village site, ponds and waste lands, built houses, sank wells and planted groves, and the landlord, whether Sayyid or purchaser, received nothing beyond the amount (eighteen per cent. on the assessment) fixed as landlord's profits."

Effect of the revision of 1863.

At the settlement in 1863, however, a new policy was adopted. "Not only were the landlords restored to their old position, but it was gravely recorded in the village administration papers which were not attested by the tenants that the very communities who during the period of settlement had exercised complete control over the estate were not in future to exercise even the minor privileges of planting trees and sinking wells in accordance with the acknowledged custom long antecedent to the

settlement of 1841. This provision and the judgment of the High Court of these Provinces imposing the penalty of dispossession on the digging of wells by cultivators proved fatal to many tenants, and although in some cases landlords were afraid to execute the decrees which they obtained, not a few tenants were ousted and a wrong was done which it has been found difficulty to remedy." On the lapse of Raja Rámdayál's *mukarari*, in 1813, the Gújars could show no valid claim to most of the villages belonging to it in the district. Many of them belonged to the Sayyids, but they had been long out of possession, and nearly all the villages of the *mukarari* were settled with the cultivating communities, and the Sayyids got only a few poor estates. "But far more fortunate were the Baniyas who had purchased in some cases the rights of Sayyids or could show deeds of sale executed by the *mukaddams*. From the civil courts the Baniyas got all they wanted; in the revenue courts it seems to have been assumed that rights on the part of the communities were incompatible with the Sayyid claims." In one village where the remains of buildings erected by the Sayyids showed the permanency of their occupation they were declared to have no rights, but where even the shadow of a right came by transfer into the hands of the Baniya díwán of the late Gújar Raja it was upheld.

Mr. A. Cadell's opinion.

"Mr. Cavendish[1] appears to have, throughout, taken the part of the communities, to have held that the representative of a community could alienate his own rights but not those of the community; but the Mahájans seem to have held their own, and while in some cases in the search for cultivating landlords even the Chamárs holding land in the midst of a weak Ját community were invested with proprietary rights, and in another Játs who could point to a descent of only two and three generations from the men who had settled round the Sayyid fort were proprietors, in others the faintest Sayyid claim became unimpeachable when it passed into the hands of a Baniya, and the strongest cultivating right melted away when he resisted it. The old communities upon whom were conferred proprietary rights have certainly shown themselves right worthy of the favour that was shown them; they have held together under no ordinary difficulties, and in a dry unwatered tract have paid to Government assessments which would have been severe even under more favourable circumstances. But strong communities cannot always be improvised, and the new, untried communities have proved unequal to the responsiblities which were imposed upon them and have, in a great measure, given way. It would probably have been more in accordance with justice and would have secured more general prosperity if the rights of both parties, the former Sayyid owners and the village communities, had been recognized. The Sayyids would then have become talukadárs, whilst the old village communities would have remained in possession of all that they had previously enjoyed."

[1] Sel. Rev. Rec., N. W. P., 1822-33, page 84.

Results of the settlements.

The result of all these measures was that in the north of the eastern parganahs, Taga, Gújar, Ját and Rajpút communities were invested with proprietary rights, whilst, in exceptional cases, Sayyids were declared proprietors, and the money-lenders who had purchased, in some cases, the rights of Sayyids, and in others those of the representatives of cultivating communities, received, in either case, the fullest consideration. The representatives of the old Gujar Rajas were allowed to retain only those estates to which no adverse claim of any strength was made. To the south, Sayyids were confirmed in full possession of the proprietary right in those estates which their ancestors had acquired To the south-west, Rajpúts were confirmed in the acquisitions made by them during the eighteenth century, and towards the south-east, a few Ját communities of long standing were admitted to engage for the Government revenue. During the seventy years of British rule, the ruin of the Sayyids has progressed rapidly year by year. Extravagance, litigation, family dissensions and an utter recklessness[1] in money matters have distinguished the race. Idle, careless, discontented and thriftless, their fate is sealed, and in a few more years the great mass of the Sayyids of Bárha must sink to the level of the ploughman and those who earn their bread with the sweat of their brow. I now turn to the history of the mutiny as the next great event deserving record here.

The mutiny.

The history of the mutiny in this district presents a marked contrast to the account given of the neighbouring district of Saháranpur. When the outbreak at Meerut, on the 10th of May, took place Mr. Berford, the Magistrate of Muzaffarnagar, was at Saháranpur, and, at once, returned to his district. He was then met with the most exaggerated reports of a general rising throughout the Duáb, and disturbed and bewildered, hastily issued orders that all the public offices should be closed. The natural effect of this unwise measure was a general impression that the British rule was suspended throughout the district, and rumours of the rapid approach of mutineer troops gained ground, and in the absence of all letters, public and private, from Meerut, appear to have been generally believed. Mr. Berford's acts strengthened this belief, and the courts were never again opened until the disturbances had ceased. Mr. Berford had heard that the prisoners in the jail intended to rise and murder the Europeans, spent the night of his arrival in the station in hiding amongst the people of Sarwat. As nothing remarkable took place during the

The Magistrate incapable of action.

[1] Mr. Grant mentions an instance of their utter carelessness in money matters. Some fifty years ago the Khátauli Sayyids had an agent to whom was intrusted the whole management of their estates. Requiring money for his son's wedding he embezzled the whole proceeds. The Sayyids mortgaged sixteen villages to a money-lender for Rs. 17,000, and he sold his claim to the Nawab of Karnál for Rs. 28,000. The Nawáb forgeclosed the mortgage and became proprietor of the whole of the villages. See further Rev. Rep., I., N. S., 162, and section on transfers *antea*.

night, he returned to the station and consulted with Mr. C. Grant, who had been recalled from camp. The result of their deliberations was an order to all the official community to abandon their bungalows and assemble at the *tahsíli* or office of the native sub-collector of the land-revenue. The result showed that there was no necessity for this course of action, for although two bungalows were burned during the night, the Magistrate's guard were able to beat off a body of plunderers from Mr. Berford's house, to which the party returned next morning. During the day the *tahsíli* was again occupied, but the guard of the 20th N I., profiting by the absence of the Europeans, plundered the treasure (Rs. 85,000) and were permitted to retire unmolested though they could have been punished without difficulty. To add to the confusion, the subahdár of the escort sent an abusive message to the tahsíldár, Sayyid Imdád Husain, accusing him of eating pork and other forbidden food, and fearful of the consequences, it was resolved to separate. Mr. Berford disappeared during the discussion and took refuge in the house of some Sayyids at Abupura, whence orders were issued for the release of the prisoners in the jail.[1]

Effect of his conduct.

This proceeding gave a final blow to all appearancy of order. The ill-disposed amongst the inhabitants saw that they could, with impunity, commit any excesses, that nobody interfered with them, and that the few men who had been captured while raiding in the city were now as free as themselves. Assisted by Mr. Berford's own servants, the rabble, at once, commenced to finish the plunder of the tahsíli treasure and the bungalows, and then proceeding to the jail, they destroyed the barracks and removed even the door-shutters and the iron rails. All the public offices were burned down on the 14th of May, and Mr. Grant is decidedly of opinion that the destruction of the records was brought about by the Sayyids, and that those individuals had spread false tales of approaching mutineers and dakaits to induce the district officials to take shelter with them and so get them out of the way while the work of destruction went on. That much of this plundering and burning could have been prevented is shown by the fact that on the 15th May the kotwál (Ahmad Husain) or principal police officer of the town, with the assistance of the mounted orderlies under Dáúd Khán, was by himself able to defeat and disperse a large body of marauders who had assembled to plunder the bazars. Fifteen to twenty prisoners were brought in, but appear to have been dismissed without any punishment. From this time to the 21st June no attack nor dakaiti was committed or attempted on the town, though reports of intended attack were frequent. The current work of the district was left to Mr. C. Grant, who established small guard-posts on the principal lines of communication, enrolled horse and foot, and despatched letters of encouragement to the principal landholders.

[1] From Mr. R M. Edwards' official narrative, dated November 16, 1858.

Murder by the 3rd Cavalry.

It was unfortunate that Mr. Grant's sense of discipline prevented him from openly resisting the feeble counsels of his senior officer, who soon gave fresh signs of weakness, for when a squadron of the 3rd Light Cavalry signalised their arrival from Meerut by shooting a wretched shop-keeper, Mr. Berford accepted the verbal explanation of the principal offender without any inquiry as to its truth. With the exception of an abortive attempt on the part of Mr. Berford to escape to Meerut, nothing of importance occurred until the 29th, when the station was reinforced by a detachment of eighty troopers of the 4th Irregular Cavalry under Lieutenant Clarke, who was subsequently relieved by Lieutenant Smith. The police did nothing to assist in keeping order. "They appear to have come to an understanding with the people that neither should interfere with the other. That if the villagers permitted the police to remain quietly at their stations and draw their pay, the villagers might commit what crimes they pleased without any attempt at prevention on their part. The natural result was that violent crimes of all kinds were daily, almost hourly, committed throughout the district, not secretly nor by night, but openly and at noon day. It is needless naming the chief crimes; it is sufficient to remark that here, as in other parts of the country, the Baniyas and Mahájans were, in the majority of cases, the victims, and fearfully have many of them been made to suffer for their previous rapacity and avarice." Parái and Bijupura were visited and punished, and matters were improving until the 21st June, when the 4th Irregulars rose and murdered their officer, Lieutenant Smith.

Murder of Lieutenant Smith by the 4th Irregulars.

This outbreak is thus described by Mr. R. M. Edwards:—"About 3 P. M., on the 21st June, a camel-rider arrived from Shámli; he did not come in by the direct road, but passed round by the public offices, and entered the lines of the 4th, and no doubt brought some letter or message to the men from their comrades stationed at Shámli. He left again in a short time, and soon after his departure a trooper went into Mr. Berford's bungalow, apparently to call Lieutenant Smith, as that officer accompanied him into the lines. Mr. Dalby, head clerk, who was in a tent outside the bungalow, saw the arrival and departure of the camel-rider, the trooper go to the bungalow, and Lieutenant Smith returned with him, and, at the time, noticed that Lieutenant Smith, who was in the habit of visiting the lines every evening, was going to his men at an unusually early hour. Shortly after the report of a musket was heard, and some natives called out that a dog had been shot. This was, however, almost immediately negatived by one of the Magistrate's chaprásis, Bishan Singh, who rushed into the bungalow, saying that the Adjutant had been shot by his men. The party then in the bungalow, *viz.*, Messrs. Berford and Grant, Mr. Dalby and Mr. Butterfield, with their families, at once left it and went to the out-houses in the

rear of the house, where the jail-guard were stationed. The risaldár of the cavalry came to Mr. Grant and told him that he had put the man who wounded the Adjutant into confinement, and asked that officer to go to the bungalow and see Lieutenant Smith, who had been brought in then by some dooly-bearers and was being attended to by the native doctor. Mr. Grant was accompanying the risaldár, when Mr. Butterfield went forward and prevented his doing so, saying the men meant treachery. The sepoys of the jail-guard now said that the whole party should at once repair to the tahsíl, which they did by a short and unfrequented road, accompanied by the guard, as the cavalry were evidently preparing to mount, and were beginning to surround the bungalow. Mr. and Mrs. Butterfield, when half way, returned to the bungalow to procure some necessaries forgotten by them in the hurry of departure. These they managed to secure, and had proceeded some distance towards the tahsíl, when Mr. Butterfield was shot by one of the troopers; his wife begged them to kill her also, but though they threatened her she was left uninjured. Mr. Butterfield's body was slashed with nine cuts and one hand was cut off on account of the ring upon it. The party reached the tahsíl only just in time, as several troopers galloped down the main road, with the evident intention of cutting them off, but returned on seeing them enter the gate.

" Lieutenant Smith, whose first wound was not mortal, was put into a dooly and was being taken to the tahsíl, when he was followed by some of the cavalry, dragged out and murdered. The body was much disfigured by sword cuts and one of the hands was cut off for the sake of the ring. The bodies of Lieutenant Smith and Mr. Butterfield were removed that night by Mr. Dalby's younger brother, and Mr. Kelly, brother of Mrs. Butterfield, to their bungalow. They lay there unburied for two days and two nights, and were eventually interred by these two men close to the house. The bodies were subsequently removed to consecrated ground. About 8 o'clock the same evening the whole of the 4th came to the tahsíl and asked the sentry what regiment he belonged to, and called out to all true Muhammadans to come over and join them, and demanded that the *kafirs* should be given up. They at first insisted that the tahsíl should be opened in order that they might rob the treasury and murder the Christians. Imdád Husain, tahsíldár, behaved extremely well, Mr. Grant informs me, and distinctly refused to listen to the troopers, though taunted, threatened, and abused by them. Dáúd Khán, sub-officer of the mounted orderlies, went out to the mutineers and asked them what they wanted. They replied, the lives of the Christians. He answered that though the Europeans had certainly come to the tahsíl they were not there, and if they were he would not give them up. They then demanded the treasure. He said he had nothing to do with the money and no power over it, and re-entered the tahsíl, when it was settled to give up the amount in the chest, about Rs. 6,000. On receiving it, the troopers left in a body, going round by Abúpura with the intention,

apparently, of discovering whether the Europeans had again sought refuge there and then passed on to Shámli, where they were joined by their comrades. Nobody attempted to stop or interfere with them. Before their departure they burned Mr. Berford's bungalow and carried off Messrs. Grant's and Berford's horses. The staging bungalow and Mr. O'Farrell's bungalow were burned the same night." This outbreak was clearly preconcerted between the cavalry at Muzaffarnagar and those at Shámli, and had the Europeans been weak enough to trust themselves to the troopers they would have all shared the fate of Lieutenant Smith and Mr. Butterfield. Imdád Husain's gallant conduct has been attributed to an intelligent foresight, but no such cause can be assigned for Dáúd Khán's staunchness. He was an illiterate, ignorant man, and had actually himself served with the mutineers: stranger still, all the mounted orderlies followed his example. Another man whose name deserves honourable mention was Ghaus Muhammad Khán, the officer of the jail-guard. The conduct of all these men shows what might have been done had there been a few resolute European officers at the head of affairs, and renders this lamentable episode all the more disgraceful to the person concerned. On the morning of the 22nd June a body of villagers attempted to attack the town, but were driven off by a party of district horse and the jail-guard. On the 26th, Lieutenant Clarke arrived with a party of the 3rd Cavalry, and on the 1st of July Mr. R. M. Edwards marched in from Saháranpur with a body of Gúrkhas and took charge of the administration of the district. He reported that on his arrival he "found the district much disorganized, all work seemed to have been long suspended, and even Government servants, with whom had been found large sums of money plundered from the treasury, were not only unpunished but had been permitted to remain in Government employ. The collecting establishment was in existence, but not the least attempt was made to collect the land-revenue. The police were also nominally at work, but did nothing but clamour for their pay, and there was no money wherewith to settle their claims." Mr. Edwards' first efforts were principally directed to the restoration of confidence in the civil station, the re-establishment of the jail, the keeping open the communication on the principal lines of road, the security of the postal service, and the collection of the land revenue. In the town of Muzaffarnagar, the shops were all closed and the people were accustomed to fly and hide themselves on hearing of the approach of marauders. Gradually by the show of a little firmness and common sense confidence was restored. In the district, the sub-collectors of the revenue reported that there was no use in attempting its realisation until the fate of Delhi was known. Here, also, when the collecting establishment knew that they must work or resign, great improvement was effected, and in a short time the revenue began to be collected with vigour. Demonstrations were made in the Shámli tahsíl and amongst the villages of the Ganges parganah; and by the end of

Mr R. M. Edwards.

August Rs. 2,70,535 were remitted to Meerut after paying all the district expenses, and this, too, "without the sacrifice of a single life and without maltreating in any way a single soul."

Unsuccessful attack on Parasauli.

A further detachment of Gúrkhas arrived towards the end of August, and about this time disturbances recommenced throughout the district. The presence of the troops was called for at Shámli, where differences had occurred between the tahsíldár and Mohar Singh, the principal Ját landholder; and from this town Mr. Grant led an expedition (September 2nd) against Parasauli in the Kándhla parganah, the residence of Khairáti Khán, Pindári, a noted rebel. The attack was repulsed and the party was obliged to return to Shámli. This movement had an unfortunate effect on the state of affairs. Khairáti Khán was at once joined by the people of Jaula, Baraut and Bijraul, and drove out the police from the fort of Budhána, where he established his head-quaters. Reinforcements were sent to Shámli and the Magistrate himself hurried to the spot. Whilst there, news arrived of a rising amongst the Shaikhzádahs of Thána Bhawan, and hourly tidings of fresh disturbances all round were received. On the 12th September the revenue peons were expelled from Jhanjhána and Kándhla. "Disaffection generally prevailed from the line of the Hindan going westwards, including portions of parganahs Budhána, Shikárpur, Baghra, and Charthával, with the entire parganah of Thána Bhawan and the Ját villages of Shámli, whilst the Kándhla parganah as far as the Jumna Canal and part of Jhanjhána was also disturbed." An attack on the Játs of Kándhla was determined upon, and on the 14th Jaula was taken after a sharp resistance, and the same night the troops encamped within the fort of Budhána.

Shámli and Thána Bhawan.

During their absence Shámli (see SHÁMLI) was attacked by the Thána Bhawan insurgents headed by the Kázi Mahbúb Ali and his nephew Ináyat Ali Khán, and was captured. The rebels murdered 113 men in cold blood, and the ferocity of the Musalmáns was shown by the slaughtering of all who took refuge in the mosque and temple adjacent to the tahsíl. "They were to a man cut to pieces, even little children were slaughtered, and the inner walls of both edifices were crimsoned with blood." The troops at once proceeded to Thána Bhawan and attacked the town, but were repulsed with the loss of 17 killed and 21 wounded, and were obliged to retire upon Muzaffarnagar, which was again threatened by marauders. On the arrival of reinforcements from Meerut, an expedition was again led against Thána Bhawan which was evacuated by the enemy, and the gates and walls were razed to the ground (see THANA BHAWAN). Muhammad Ali Khán of Jalálabad was made tahsíldár of Thána Bhawan, Shámli was re-occupied, and the forces proceeded to the Ganges parganahs, to operate against the troops of the rebel Rohilla Nawáb of Najíbabad. With the exception

of a smarts kirmish at Miraupur, the operations of the troops in this district until the end of the disturbances were unmarked by any great action and may be described in Mr. Edwards' own words:—"We were continually kept on the move, marching and countermarching up and down the river, by the rapid movements of the masses of rebels on the opposite bank. Their numbers were so greatly superior to ours that we were obliged to be constantly on the watch, as the Ganges had become so low that fords were very numerous, and the river line was so extensive that our forces had to be divided into very small detachments. Our police-stations and outlying posts were several times attacked and destroyed, but the rebels so rapidly recrossed the river that we never could catch them though every exertion was made to do so. These attacks became so frequent that all the police posts had to be removed out of the *khádir* to the high land. The jungle in the *khádir* was burned by order of Colonel Brind, who had been appointed to command in the district. This deprived the enemy of the power of approaching our posts in any numbers without being perceived. Not a week passed that I did not obtain intelligence of the intention of the enemy to cross and make a night attack, and large numbers of them would frequently assemble on the river bank, but either their courage failed them or these were mere demonstrations got up with the view of harassing and annoying us." Since the mutiny, with the exception of the new land settlement, the famine, the increase of irrigation and the prevalence of malarious fevers, there are no events of interest to record.

Medical history.

The general sanitary history of the district has already been sufficiently sketched in the introduction. Dr. Kirton, the Civil Surgeon, thus summarises the local medical history:—"The prevailing epidemic diseases are fever, small-pox, dysentery and diarrhœa; malarious fever is now (1873) the most common fatal disease amongst the people. It assumes mostly the intermittent or remittent types, and the attacks are followed by enlargements of the spleen and liver by tympanitic or dropsical swellings and colliquative diarrhœa. It is due to malarious causes and occurs with greatest intensity at the end of the rainy season in August, September, and October. All classes of the people suffer from it.[1] Small-pox is common in the district, and stands next to fever as a destructive disease amongst the people. It occurs all the year through, but spreads to a greater extent during the dry hot months of April, May and June than at any other time of the year. Outbreaks of small-pox are sometimes preceded by epidemics of measles. Diarrhœa and dysentery are also common diseases amongst the people. They

[1] It is right to add that in 1817 and 1843 the district was visited by epidemics of malarious fever similar to those which devastated it from 1868 to 1873; neither of these can be attributed to the canal. In 1817 there was no irrigation from canals, and in 1843 the Ganges canal had not been commenced.

affect chiefly the lower classes of the population, who subsist on coarse food and suffer from exposure. Both affections prevail most frequently during the autumn months of the year, when the days are hot and the nights cold. Besides the disorders already mentioned, ophthalmia may be said to prevail as an endemic disease in the district. It appears mostly during the hot months of the year, and spreads amongst the inhabitants of large towns, who live for the most part in crowded houses. Repeated attacks of this disease lead in many instances to partial or total blindness. Some forms of skin disease, and scrofula to a limited extent, also prevail in the district. Mutilated and blind persons, whose deformities are to be attributed to leprosy and neglected eye-disorders, may be seen in the large towns. Cholera is not endemic in the district, but it may occur as an epidemic disease. In 1861 it visited the district, in July and August, after the famine. On this occasion its ravages were confined to towns and villages on the low ground near the river Krishni, to the west of the district. The mortality caused by it was considerable. Again in 1867, in April, cholera was brought into the district by pilgrims from Hardwár. It did not then spread to any great extent, but occurred mostly along the lines of road followed by the pilgrims."

Enough has been said regarding the spread of fever in the district both in the introduction and under the Meerut district. The figures hereafter given show the gradual increase of fever mortality since 1869, and it would appear that the disease is now as rapidly disappearing. One result of the special inquiries made by Dr. Planck in 1871 was that Government recognized the necessity for limiting canal-irrigation in places where the spring-level was close to the surface. The return to well-irrigation in such places and the prohibition of the cultivation of the high rain-crops near the town-sites have been tried with much benefit. The Government practically endorsed the opinions of the Sanitary Commissioner (G. O. No. 20A. of March 19, 1872,) and wrote:—"This disease (malarious fever) seems from a considerable induction in the present inquiry to follow canal-irrigation and to prove a connection between the constitutional depression and fever attendant on it and canal-irrigation under these unfavourable conditions." In addition to the schemes already noted as undertaken by Government for the improvement of the drainage of the swamp-affected lands, other projects are in preparation to improve the sanitary condition of the district and check, as far as possible, the evolution of malaria from the soil. With this view it is intended to clear out the beds of existing water-courses wherever they have silted up and open out new channels wherever they may be found necessary. Much improvement has been effected around the civil-station itself and towards Shámli, Saláwar, and Bhainswál. During the year 1871, Government organised a special medical establishment for the relief of the fever-stricken population of this district. Eight hospital assistants were employed throughout the district

under the superintendence of Dr. Kirton, the Civil Surgeon of Muzaffarnagar, from August to October. Temporary dispensaries were opened at Budhána, Shámli and Jánsath: 3,122 cases were treated by these men, of which 2,240 were cured; regarding 758 cases the result is not known, 4 persons died and 110 remained under treatment at the end of the year. Still, notwithstanding this great success, the returns show 4,360 deaths from malarious fever in this district during the fever months of August, September, and October. The deaths from all other causes during the same period numbered only 1,174 cases.

The following table shows the mortuary statistics for eight years from the Sanitary Commissioner's report:—

Year.	Fever.	Small-pox.	Bowel complaint.	Cholera.	Other causes.	Total.	Percentage of death to 1,000 of the population.
1867, ...	514	965	755	2,051	4,855	13,786	20·1
1868, ...	4,131	2,345	454	228	3,792	10,950	16·0
1869, ...	10,541	1,074	842	166	4,467	17,090	25·0
1870, ...	16,855	2,966	...	160	4,901	24,882	36·45
1871, ...	15,507	4,332	1,811	95	617	22,362	32·76
1872, ...	13,794	1,097	1,372	35	559	16,857	23·92
1873, ...	11,932	3,129	1,296	5	788	17,150	24·81
1874, ...	12,955	877	1,046	2	824	15,704	22·75

Cattle diseases.

"The chief epidemic cattle diseases of the district are rinderpest, foot-and-mouth disease and pleuro-pneumonia. Rinderpest (*mahámi, chera*): symptoms: heat, hard breathing, great thirst, twitching of skin, discharge from eyes and nostrils, watery stools mixed with blood, great prostration. In fatal cases death ensues between three and eight days. Foot-and-mouth disease (*rora, akrâo, tephora*): symptoms,

fever, thirst, eruption in the mouth, swelling of cheeks, sores in the feet, inability to feed, constipation, distended stomach. Duration ten or twenty days or more. Pleuro-pneumonia (*piphri*, H., lung-disease): symptoms, fever, dry cough, difficulty of breathing, loss of appetite, distended nostrils, pain over chest on pressure, constipated bowels. In severe cases death may result in a few days, in mild cases the progress of the disease is more protracted. These diseases are considered contagious, and are known by different names in different parts of the district. Rinderpest is the most fatal disease. Foot-and-mouth disease is more common than rinderpest, but less fatal. Pleuro-pneumonia is least known. Disease amongst cattle prevails mostly in the district towards the end of the rainy season. In 1867 it was computed that about ten per cent. of the cattle of the district died from disease; but since that date sickness to any great extent amongst cattle has not occurred.

Native medicine.

The practice of medicine as followed by the *hakims*, or native practitioners, is empirical and unscientific. They adhere to the humoral pathology of Aristotle, and maintain the doctrine that all disorders of the human body arise from heat and cold. In accordance with this notion, they prescribe their remedies, but they endeavour to keep secret the ingredient of their nostrums. In acute disorders their remedies are often inert. "Fever is treated by privation of food, followed by doses of warm water; and when the fever subsides, rice water and chirayta are given. In ophthalmia their remedies often fail, and instances of loss of sight, due to their want of knowledge in the treatment of this disease, are common. Surgery as practiced by the natives is also crude and somewhat barbarous. For external hurts the part is treated with cowdung or turmeric, or contused wounds are dressed with plasters made of opium, turmeric, and lime, which become hard and are allowed to remain on the part until the wound heals. When a limb is wounded the whole of it, instead of the blood-vessel only, is compressed to stop the bleeding. They sometimes successfully depress cataract in the eye and extract stone from the bladder, but their treatment of fractured bones is bad. The splints are slips of bamboo cut much too short, and applied so tight as to cause swelling and sometimes mortification. In large towns Jarrahs are sometimes met with who can amputate a limb, tie a blood-vessel, or excise a tumour." There is but one Government dispensary in the district, that in Muzaffarnagar itself, in which, during the year 1873, the number of in-door patients treated was 226 and the number of out-door patients was 5,949. The receipts for the same year amounted to Rs. 3,630, of which Rs. 2,618 were contributed by Government, while the expenditure amounted to Rs. 3,051. During the year 1873-74 there were 10,786 vaccine operations, of which 8,006 were successful, 1,727 were unsuccessful, and the result in 1,053 cases could not be ascertained.

The following list gives the drugs, both indigenous and imported, that are ordinarily used by the *kabiraj* or *hakim* (native practitioner of medicine):—

Native name.	Scientific or common name.	Native name.	Scientific or common name.
Abnús (ebony),	Diospyros melanoxylon.	Kath,	Acacia catechu.
Adrak,	Ginger.	Kesar (zafran),	Saffron.
Afim,	Opium.	Kharwa tel,	Mustard-oil.
Ajwáyan,	Lovage.	Khurasáni Ajwáyan,	Hyoscyamus niger.
Alsi,	Flax.	Kuchila,	Strychnos nux-vomica.
Amaltás,	Cathartocarpus fistula.	Lahsan,	Garlic.
Amrúd,	Guava.	Lál mircha,	Red-pepper.
Anantmúl,	Hemidesmus Indicus.	Laung,	Cloves.
Anár,	Pomegranate.	Madár,	Calotropis gigantea.
Anísún,	Pimpinella involucratum.	Májúphal,	Oak gall.
Aonla,	Emblica officinalis.	Mansil,	Bisulphuret of arsenic.
Astrak,	Styrax officinalis.	Methi,	Fenugreek.
Atís,	Aconitum heterophyllum.	Nagar motha,	Cyperus longa.
Babúl,	Acacia Arabica.	Naushádr,	Ammonia hydrochlorus.
Bájra,	Penicillaria spicata.	Nil.	Indigo.
Bahera,	Terminalia bellerica.	Nila tutiya,	Bluestone: sulphate of copper.
Baiberang,	Myrsine Africana.		
Belgiri,	Ægle marmelos.	Nimak,	Muriate of soda, salt.
Binaula,	Cotton seed.	Nim,	Melia azadirachta.
Bish,	Aconitum heterophyllum.	Pakánbed,	Gentiana kurroo.
Bol,	Balsamodendron myrrha (seeds.)	Pán,	Piper betel.
		Papíta,	Strychnos Ignatii.
Buch,	Acorus calamus.	Pára,	Quicksilver.
Charas,	Cannabis sativa.	Patpápra,	Fumaria parviflora.
Chirayta,	Ophelia chirayta.	Phitkari,	Alum.
Dálchini,	Cardamoms.	Pudina,	Mint.
Dhák,	Butea frondosa (seeds).	Post,	Poppyheads.
Dhaniya,	Coriander seed.	Rai,	Mustard.
Dhatúra,	Datura alba.	Rasot,	Berberis Asiatica.
Dhúna,	Shorea robusta.	Raskapúr,	Bichloride of mercury.
Dúna,	Artemisia Indica.	Renri ka tel,	Castor-oil.
Elwa,	Aloes.	Rítha,	Soapnut.
Gandak,	Sulphur.	Saji matti,	Carbonate of soda.
Gandabiroza,	Turpentine.	Sakmúniya,	Convolvolus scammonia.
Ganja,	Cannabis sativa.	Sálib misri,	Salep.
Genda,	Tagetes erecta.	Samm-ul-fár,	White arsenic.
Ghunch,	Abrus precatorius.	Sanna,	Cassia elongata.
Gol mircha,	Black pepper.	Sankhiya,	Arsenic.
Gulkand,	Conserve of roses.	Sarífa,	Custard-apple.
Har,	Terminalia chebula.	Sarson,	Mustard.
Hing,	Assafœtida.	Shingarf,	Bisulphuret of mercury (cinnabar).
Iláchi,	Cardamoms.		
Imli,	Tamarind.	Sherkhist,	Fraxinus floribundus.
Indráyan,	Cucumis colocynthis.	Shora,	Nitrate of potash.
Isharmúl,	Aristolochia Indica.	Sohága,	Borax.
Ispaghol,	Plantago ispaghula.	Sohági,	Biborate of soda.
Jan álgota,	Croton tiglium.	Sonf,	Fœniculum vulgare.
Jawáshír,	Opoponax chironum.	Soya,	Anethum sowa.
Jonkh,	Leech.	Supári,	Acacia catechu.
Kaláb chíni,	Piper cubeba.	Surma,	Sulphuret of antimony.
Kahruba,	Vateria Indica.	Tamáku,	Tobacco.
Kakri,	Cucumis pubescens.	Taroi,	Luffa acutangula.
Káladána,	Pharbitis nil.	Teli,	Melon cichori.
Kafúr,	Camphor.	Tili,	Sesamum Indicum.
Kaliya matti,	Chalk.	Til ki tel,	Sesamum oil.
Kamela,	Rottlera tinctoria (Roxb).	Tísi,	Linseed.
Kandari,	Scilla Indica.	Tísi ka tel,	Linseed oil.
Kasís,	Sulphate of iron.	Ushak,	Dorema ammoniacum.
Kath karaunja,	Guilandina bonduc.	Zangár,	Verdigris or subacetate of copper.

GAZETTEER

OF THE

MUZAFFARNAGAR DISTRICT.

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AILAM, a village in parganah Kándhla of the Muzaffarnagar district, is distant 30 miles from the civil station, 14 miles from Baraut in the Meerut district, and 12 miles from Shámli. The population in 1865 numbered 2,700 souls, of whom the greater portion were *Játs*; in 1872 there were 3,065 inhabitants. There are about 500 mud huts in the village, which is made up of two parts, the Patti Khúrd or "small division" and the Patti Kalán or "large division," each of which has a good brick-built house, the residence of the proprietor. The site and suburbs are rather low and much water collects here during the rains; the well-water is found at a depth of fourteen feet from the surface, which is about one-half the depth it stood at before the introduction of the

eastern Jumna canal now running about a mile to the west. The village is a fertile one and the people are industrious and appear to be prosperous. Ailam lies on the route from Dehli to Saháranpur between Baraut in Meerut and Shámli in this district, and has an encamping-ground. The road all through is earthen, raised and bridged, but liable to swamp in places in the rains. From Ailam to Shámli the road passes close to the left bank of the eastern Jumna canal through the lands of Kándhla, Fázilpur, Kandrauli and Latúi, all highly cultivated villages. Water is plentiful and supplies are procurable after due notice.

Physical features.

Baghra or Bagra, a parganah in the Muzaffarnagar tahsíl of the same district, is bounded on the north by parganah Charthawal, on the west and north-west by parganahs Thána Bhawan and Shámli, on the east by parganah Muzaffarnagar, and on the south by parganah Shikárpur. According to the census of 1872 this parganah had then a total area of 88 square miles and 282 acres, of which 66 square miles and 531 acres were under cultivation. The area assessed to Government revenue during the same year was 87 square miles and 388 acres, of which 66 square miles and 117 acres were cultivated, 11 square miles and 239 acres were culturable, and 10 square miles and 32 acres were barren. The parganah lies between the Káli and the Hindan; the former flows southwards through the eastern portion, and the latter just outside the eastern boundary in the same direction. The central tract slopes down on either side to these rivers, and owing to its position, is cut off from artificial irrigation, and there are but few wells and tanks. This portion suffered much during the famine of 1860-61, and must always give much anxiety in seasons of drought. To the west of the Hindan eleven out of nineteen villages are watered from a distributary of the eastern Jumna canal.

Fiscal history.

The settlement of 1841 was made by Mr. E. Thornton and that of 1862 by Mr. S. N. Martin. It was then found that cultivation had increased during the twenty years of the old settlement from 39,434 acres to 42,038, giving an increase of 2,604 acres, or 6·6 per cent. The old irrigation returns are wanting, but there is reason to believe that there has been an increase of irrigation throughout. Out of the 18,895 acres irrigated in 1862, 14,012 acres were watered from wells. Mr. Martin found the parganah sadly impoverished and the people suffering under a reasonable assessment, and though a former Collector (Mr. Edwards) considered Baghra fairly prosperous, Mr. Martin was of a different opinion, and writes:—"I cannot see how it can be well off until some means be devised for the extension of irrigation to the Duáb of the Hindan and Káli rivers." The landholders at present have to contend with the absence of water, so necessary for a sandy, arid soil, the absence of a sufficient supply of manure, the want of capital and

the desertion of cultivators.[1] Drought and the disturbances of 1857 did much to bring about the state of depression found in 1861, and the consequence was that a light assessment was found necessary. The transfers that took place during the previous settlement amounted to 16,494 acres, or over 30 per cent. of the entire area. Out of 75 estates only 18 escaped changes of some kind or other, and the average price fetched at private sales was less than double the annual revenue, a result which would seem to show that the value of property has fallen off very much in this parganah, and, as a matter of fact, the existing land-holders are much in debt. The agricultural population comprises Játs (both Hindu and Musalmán), Tagas, Rajpúts, Brahmans, Shaikhs, Sayyids and Patháns, and there are numerous cultivating communities of Játs who have now for the first time been fairly assessed. The Hindu communities are peaceful agriculturists, but when converted to Islám, as many have been in this parganah, they would appear to become turbulent and idle. Mr. Martin writes[2] that anything like severity in the assessment would lead "to desertion, to poverty and to the increase of crime on the part of the Muhammadan Tagas, Rajpúts and Játs, all disorderly classes."

Land-revenue.

The following statement shows the statistics of the old and new settlements and the figures given in Mr. Cadell's review in 1870:

Year.	Total area.	Barren.	Revenue-free.	Cultur-able.	Cultivated.			Revenue.	Rate per acre on cultivated area.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a p.
1848, ...	55,460	7,978	1,190	6,858	...	...	39,434	86,362	2 3 0
1862, ...	56,605	6,363	1,090	7,114	18,896	23,142	42,038	81,691	1 15 11
1870, ...	56,605	6,467	493	7,298	19,059	23,288	42,347	82,391	1 15 2

The land-revenue for 1872, according to the census papers, amounted to Rs. 82,963 (or with cesses, Rs. 95,926), falling at a rate of Re. 1-7-5 per British acre on the total area, at Re. 1-7-8 per acre on the area assessed to Government revenue, and at Re. 1-15-0 per acre on the cultivated area.[3] The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 1,94,376.

Population.

According to the census of 1872, parganah Baghra contained 48 inhabited villages, of which 6 had less than 200 inhabitants; 10 had between 200 and 500; 17 had between 500 and

[1] The remissions, during the famine years, amounted to Rs. 7 971, and the advances from charitable funds for aid in agriculture to Rs. 2,088. Mr. Keene estimates the number of emigrants from this parganah alone at 3,687 souls. [2] Mr. Cadell recommended only six estates for permanent settlement. [3] Throughout I have given the census figures and percentages as recorded and without correction.

1,000; 9 had between 1,000 and 2,000; 5 had between 2,000 and 3,000, and one had between 3,000 and 5,000. The settlement record shows 75 estates on the register in 1863.

The total population in 1872 numbered 44,164 souls (20,013 females), giving 501 to the square mile. Classified according to religion, there were 33,650 Hindús, of whom 15,088 were females, and 10,514 Musalmáns, amongst whom 4,925 were females. Distributing the Hindu population amongst the four great classes, the census shows 2,642 Brahmans, of whom 1,150 were females; 958 Rajpúts, including 351 females; 2,819 Baniyas (1,272 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 27,231 souls, of whom 12,306 are females. The principal Brahman subdivision found in this parganah is the Gaur, who number 2,605 souls. The Rajpúts are chiefly Pundírs and the Baniyas belong to the Agarwál (1,703) and Saraugi subdivisions. The other castes comprising more than one thousand members in this parganah are the Chamár (6,145), Gararíya (1,143), Juláha (1,102), Khákrob (1,887), and Ját (7,350). Representatives of nearly all the other castes common to the district are also found. Amongst the Musalmáns, Sayyids number 524, Patháns 263, and Shaikhs 9,398.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 352 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,551 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,373 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 5,921 in agricultural operations; 2,485 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 3,129 persons returned as labourers and 534 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 998 as landholders, 13,025 as cultivators, and 30,141 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 959 males as able to read and write out of a total male population numbering 24,151 souls.

Baghra is an old Akbari parganah. The name is said to be derived from one Raja Bag or Bagra. Prithiráj, also, held possession of this parganah, of which the records in the kanúngos' possession are said to date from 935 A.D. Under the Mughals it was absorbed in the Dehli Subah. Later still a great portion of it formed part of the Sardhana *jágír*. The alterations of boundary in this parganah have been considerable, and numerous exchanges have been made at

various times with Badhána, Charthawal, and Shikárpur. In 1816 Baghra had 37 villages. In 1840-41 one village was received from Deoband and four from Thána Bhawan, giving together a revenue of Rs. 5,360, and at the same time two villages assessed at Rs. 1,400 were transferred to Deoband.

BAGHRA, a village in the parganah of the same name in the Muzaffarnagar district, is distant 8 miles from the civil station. The population in 1872 numbered 4,158 souls. This village gives its name to the parganah within which it is situated. There is a police-station and a branch post-office here, and a market on Wednesdays.

BARÁLSI, a village in parganah Charthawal of the Muzaffarnagar district, is distant 13 miles from the civil station. In 1865 there were 1,650 inhabitants, and in 1872 the numbers were 1,559, chiefly Rajpúts. The site is raised, especially on the east, where a natural drainage line leads to the Hindan, distant about two miles to the east; the Krishni flows at about the same distance to the west. The well-water in the upper part of the village is found at a depth of 25 feet from the surface, and in the lower part at 14 feet, rising to 8 in the rains. The Kalarpur distributary of the eastern Jumna canal furnishes water for irrigation, and a cut has been made from it to the north of the village to carry off the superfluous moisture to the Hindan drainage line already mentioned. The village has suffered much from fever and small-pox, enhanced no doubt by its filthy condition, for, formerly, dung-heaps and open water-holes were common. Barálsi possesses a good school, which is very fairly attended. The road from the civil station to Thána Bhawan passes through the village lands.

BARLA or Balár, a village in parganah Púr Chhapár of the Muzaffarnagar district, is distant 9 miles from the civil station. The population in 1872 numbered 2,658 souls, chiefly Tagas, both Hindu and Musalmán. There is a police out-post here. The village is divided into five pattis, and its former fiscal history is given by Mr. Cavendish in Sel. Records, N.-W. P., 1822-33, p. 85, and Board's Records, 10th January, 1825, Nos. 2-4.

BASERA or Baseda, a village in parganah Púr Chhapár of the Muzaffarnagar district, is distant 11 miles from the civil station. The population in 1865 numbered 3,839 souls, and in 1872 there were 3,832 inhabitants, chiefly Játs. Basera is a prosperous agricultural village, and when compared with others in the district is tolerably well kept. There are about 800 mud houses in the village and about 30 shops. The well-water is good and is found at a depth of 33 feet from the surface; before the introduction of the canal it was 48 feet from the surface. This village formerly belonged to the Bárha Sayyids and fell out of their possession during the Pathán rule. It subsequen ly formed a part of the *mukarari* of Raja Rámdayál of Landhaura, and, in 1813, the cultivating body were invested with the proprietary rights. They, however, soon broke down under their new responsibilities, and Básera passed from their hands.

BEGHARAZPUR, a small village in parganah Khátauli of the Muzaffarnagar district, is distant 6½ miles from the civil station. The population in 1872 numbered only 415 souls, and there is a police out-post here. This village is a station of the Great Trigonometrical Survey, and lies in lat. 29°-22′-35″ and long. 77°-44′-29″, at an elevation of 865·94 feet above the level of the sea. The upper markstone of the survey station is fifty feet above the level of the ground. It stands on one of the sand mounds common in this part of the Duáb, and is close to the high road leading from Meerut to Muzaffarnagar. The small village of Begharazpur lies 0·9 miles to the north-west of the Great Trigonometrical Survey station, Jaroda to the north-north-west, 1·8 miles, and Mansúrpur to the east, 2·8 miles. The height was deduced from the spirit-levelling operations of the survey. The village is included in the drainage operations now being carried out in connection with the Muzaffarnagar drainage scheme.

BHAINSWÁL, a large village in parganah Shámli of the Muzaffarnagar district, is distant 27 miles from the civil station. The population in 1865 numbered 3,120 souls, and in 1872 there were 3,004 inhabitants. There are over one hundred substantial brick-built houses in Bhainswál, chiefly owned by Játs, Brahmans, and Baniyas. The site is very low and almost depressed, and lies close to and on the west of the main channel of the eastern Jumna canal. The water in the wells is found at a depth of about eight feet from the surface and in the rains is almost at the surface. There is no roadway through the village: one reaches about half way, and another all round it, and the lanes connected with them are very narrow, tortuous and uneven. To the east a canal distributary raised to five feet runs to the south, and higher up, on the west, another, and a third a little farther on. On all other sides there are extensive water-holes. Some years ago a cutting was made on the west to carry off the superfluous drainage from the Jhanderi jhíl into the Kátha Nadi. This cutting runs from north-east to south-west; it passes the site about fifty yards to the west, but requires cleaning out. In the rains, the entire village is nearly surrounded by water, and there has been much sickness from malarious fever and its consequence, spleen disease and impotency. The rain-fall, as recorded by the canal authorities has been as follows:—1866-67, 16·6 inches; 1867-68, 28·0; 1868-69, 13·4; 1869-70, 13·5; 1870-71, 39·3; 1871-72, 40·8; and 1872-73, 28·8 inches. There is some trade in sugar refining in the village and much *múnji* rice cultivation around the site. In the centre is a mound of earth about 30 feet high, now the scene of a *mela* or religious festival, and said to contain the grave of Pír Ghaib, the founder, who used to house his cattle there when all around was covered with water. (See Cutcliffe's Report, App. *xlii.*) There is a branch post-office here.

The site.

BHUKARHERI, a parganah of the Jánsath tahsíl of the Muzaffarnagar district, is bounded on the north by parganahs Púr Chhapár and Gordhanpur, on

the west by parganah Muzaffarnagar, on the east by the river Ganges, and on the south and south-west by parganahs Jánsath and Bhúma Sambalhera. According to the census of 1872 this parganah had, then, a total area of 128 square miles and 64 acres, of which 77 square miles and 602 acres were under cultivation The area assessed to Government revenue during the same year was 122 square miles and 435 acres, of which 72 square miles and 435 acres were cultivated, 31 square miles and 64 acres were culturable, and 18 square miles and 632 acres were barren.

General appearance.

Bhukarheri forms the central portion of the eastern division of the district. The Ganges canal runs from north to south through the middle of the western portion of the parganah and supplies abundance of water. Formerly the distance of water from the surface was so great that irrigation was almost unknown, and the few fields that received water were almost without exception situated to the south of the parganah. The depth of water from the surface, seldom less than 60 feet, renders well-sinking difficult and expensive, and in the south-east corner of the parganah the absence of wells has prevented the effectual location of tenants in several estates. Equally with the depth of water, the prevalence of sand is characteristic of the parganah. The sand-ridges run with marked regularity from north to south and are so numerous that seven distinct lines can be traced through the upland, which in no place exceeds ten miles in breadth. The highest ridges are on the west and are continuations of the Púr Chhapár sand-hills : to the east they are lower and more level, and are only left unirrigated because they are poor, and until more careful cultivation brings them to the state in which irrigation will prove remunerative. On either side of the sand, the land slopes down in sandy loam to the loamy patches in the depressions between the ridges. The position of these sand-ridges has mainly determined the distribution into circles for the purposes of assessment. Mr Cadell made three circles in the uplands ; the third and worst contained the villages amongst the high western sand-hills cultivated by careless Sayyids and thriftless Gújars, and nine villages along the upland bank overlooking the Ganges valley occupying a tract about seven miles in length by two to three miles in breadth. From Shukartár to the southern boundary of this latter tract there is only one well in the upland which supplies drinking water for two villages. The other petty hamlets are dependent on the canal distributaries, and on wells in the Ganges valley when the canal is closed. Under such circumstances, it is not remarkable that farming is careless, and the cultivators comprise resident Gújars and so-called Chauháns and tenants of other classes only from distant villages The second circle of villages comprises those lying to the west of the canal and to the east of the third of the western lines of sand-hills. The three ridges of sand to the west of the parganah run close together, and except to the extreme north there is little good land between

them, but to the east of the third ridge, the land slopes away into a tolerably fertile plain through the midst of which runs the Ganges canal. To the south of the parganah the lands around Tisha, the five estates in the extreme south, Bhukarheri in the north-east, and five other villages in its neighbourhood have been placed in the first class. The estates to the east, west and north of the first circle and to the east and west between the first and third circles have been placed in the second circle. Although in several instances defective irrigation has been the cause of placing otherwise good estates in the second-class, there are in most cases other and sufficient reasons for altering the classification followed in 1841.

The ravines of the upland ridge.

The villages bordering upon the *khádir* of the Ganges possess a strip of good land, but gradually deteriorate as they approach the ravines which break the descent from the uplands to the edge of the *khádir*. "Even in the inhospitable ravines of the Ganges, villages may be found dotted at intervals of two or three miles; though, in these wild situations, the shade of trees is almost unknown, pure water is scarce, and the children are exposed to constant risk from the incursions of wolves. The pastures of the *khádir* are as accessible on the one side as the high arable table-land on the other, and the inhabitants can combine their more congenial occupation of herding cattle with the enforced task of agriculture. By numerous passes winding through the openings in the upland bank the lowlands of the Ganges itself is reached which exhibit a far stretching level tract of a rich brown, variegated here and there with green patches and shining streams, the whole tipped by the broader line of the Ganges. Such is the appearance which the *khádir* wears in the cold season. Trees are scarce, and by this time of year the grass has lost its verdure and put on the brown tint which characterises the whole tract. Only by rising crops or by reedy patches are spots of brighter colour presented to the eye. The soil, though not so deep or strong as that of the high land, possesses the vigour of freshness, as new land is being brought under the plough every year, and the disproportionately small number of inhabitants, occasioned by the difficulty of inducing them to settle, allows of an almost annual change in the land selected for cultivation. The crops are, therefore, on the whole, good, though the numerous risks to which they are exposed from inundation, the ravages of wild animals, and the unsettled habits of the cultivators, often render the returns from these estates a mere matter of speculation." The Ganges approaches to within a few hundred yards of the ravines about the centre of the parganah and divides the *khádir* into two portions. The southern has been described above. The northern portion contains the great Jogawála jhíl and the tracts affected by percolation from the Solání river.

Fiscal history.

The settlement under Regulation IX. of 1833 of this parganah was made by Mr. Elliot in Meerut. The revision of 1863 was effected by Mr. C. Grant, but when the result of a

further investigation made with regard to the question of a permanent settlement became known, Mr. Grant's assessment was condemned as unduly low, and Mr. A. Cadell was appointed to revise the settlement of the upland portions of the parganah. His work was completed in 1874. The following statement shows the statistics of area of the three revisions :—

	Total area.	Cultivated.			Culturable	Revenue-free.	Barren.	Revenue.	Rate on cultivated area.
		Wet.	Dry.	Total.					
1841.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p
Uplands, ...	62,811	162	34,668	34,830	14,678	2,090	11,313	48,931	1 6 6
Lowlands, ...	14,833	...	3,118	3,118	9,372	...	2,343	4,245	1 5 9
Total, ...	77,644	162	37,786	37,948	23,950	2,090	13,656	53,176	1 6 8
1863.									
Uplands, ...	64,491	25 349	18,844	44,193	6 716	2,088	11,494	55,951	1 4 3
Lowlands, ...	13,426	21	3,318	8,339	8,320	...	1,767	4,609	1 6 1
Total, ...	77,917	25,370	22,162	47,532	15,036	2,088	13,261	60,560	1 4 5
1875.									
Uplands proper, ...	59,743	23,917	21,579	45,496	3.395	2,034	8,768	...	...
Lowlands, ...	4,834	...	775	775	2,370	...	1,489	...	...
Total, ...	64,577	23,917	2 ,354	46,271	5,965	2,084	10,257	74,311	1 9 8
Lowlands, ...	13,426	2	3,318	3,339	8,320	...	1,767	3,750	1 1 11
Grand Total, ...	78,003	23,938	25,672	49,610	14,2-5	2,084	12,024	78,061	1 9 2

Mr. Cadell's revision of 1872 extended to the uplands only. The figures for 1875 distinguish the lowlands attached to the upland villages on the edge of the *bangar* and the total area of 64,577 acres is the area dealt with in this notice. The lowland area of 13,426 acres refers to villages lying wholly within the *khádir*. The soils of the upland area at Mr. Cadell's revision are given at page 351.

Crops.

In the same area, the *kharif* crops occupied 58·7 per cent. of the total area, and amongst them sugar-cane covered 5·5 per cent. of the same area; cotton, 3·7; *munji* or fine rice, 5·7; *urd*, 10; and *bájra*, 18·7 per cent. In the *rabi*, wheat covered 22·3 per cent. of the total area besides 1·5 per cent. as a *dofasli* or extra crop; barley, 12·7; gram, 2·7; and *gojai* or mixed barley and wheat, 3 per cent. In this parganah, the *munji* variety of rice is treated as quite equal to sugar-cane in importance, and where cash rents are taken, land sown with *munji* often brings one-third, a higher rent than that which is paid for land which is ordinarily planted with cane. *Munji* is followed by cane and cotton in rotation, and in the cold-weather

by wheat and gram, so that it clearly occupies the best land. In 1841, sugar-cane occupied 4 per cent. of the cultivated area; cotton, 2; wheat, 20; and barley, 10 per cent. During the currency of the past settlement (1841-60) land sold at very low rates, owing, it is said, to a combination amongst capitalists, but since 1863 prices have ruled at from 25 to 33 years' purchase on the land-revenue. Between 1842 and 1870, the transfers by private sale amounted to 19·4 per cent. of the total area, by public sale to 24·2 per cent., and by mortgage to 16·3 per cent., details of which have been given in the district notice. Throughout, the tendency has been to accumulate the land in the hands of a few owners. During the past thirty years both cultivation and irrigation has increased enormously: the former by 11,493 acres, or 33 per cent., and the latter by 24,444 acres, or 152 times as much as was watered before the opening of the canal. And this increase has taken place in the uplands alone; in the *khádir*, irrigation is unimportant and has fallen off rather than increased. Much of the increase in cultivation is due to the large amount of land lying untilled in 1840, owing to the great drought of 1837-38. Here, however, a drought no longer means starvation, loss of cattle and dispersion of cultivators, but a season of large profits and increased agricultural prosperity, nor does it involve any serious diminution of the cultivated area.

Transfers.

Rent-rates.

The rent-rates assumed by Mr. Cadell for each of his circles were as follows:—

	Irrigated.			Dry.		
	Bárah.	Loam.	Sandy loam.	Loam.	Sandy loam.	Sandy.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1st circle, ...	12 0 0	5 13 0	4 2 0	3 6 0	2 0 0	1 5 0
2nd „ ...	9 0 0	5 1 0	3 6 0	3 0 0	1 11 0	1 0 6
3rd „ ...	...	3 12 0	2 10 0	2 4 0	1 5 0	0 13 6

These rates slightly modified for the estates cultivated by Sayyids and Gújars and applied to the soil areas gave a rent-roll of Rs. 1,48,385 for the uplands. The assumed rental in 1841 was Rs. 73,958, and in 1863 was Rs. 1,31,232. The full rates, in 1872, without regard to the caste or character of the tenants, give a rental of Rs. 1,58,182. These figures would point to a revenue at half assets of between Rs. 75,000, and Rs. 80,000 and the revenue actually assessed amounted to Rs. 74,311. The settlement of the uplands for a series of years has been sanctioned and came into force from 1873-74, while an annual settlement for the fourteen estates in the *khádir* has been recommended for adoption. On the whole Mr. Cadell thinks that had not canal irrigation been extended to this parganah no increase over the demand of 1841 could be made, for no increase in the population or cultivation could have been counted upon. He would

estimate the increase of the assets due to the Ganges canal in Bhukarheri at Rs. 50,000, being at the rate of Rs. 2 per acre; one-half of which has hitherto gone into the owner's pocket, but now that an owner's rate has been imposed, this will form a portion of the regular revenue due to canals. Six villages lying in the *khádir* to the north and east of the Soláni have been incorporated with the *choel* circle of Gordhanpur, and the assessment of the remaining *khádir* estates has been lowered from Rs. 4,609 to Rs. 3,750, or by Rs. 859. The parganah formerly belonged, for the most part, to the Sayyids of the Chhatrauri clan, who rose to eminence on the ruin of their brethren of the Tihanpuri branch in the reign of Muhammad Shah. The southern portion of the parganah was no doubt an early acquisition of the clan, but until a comparatively recent period the Játs and Tagas held their own in the north, and in this portion of the parganah the Sayyids claimed as purchasers of the rights of others. In the days of anarchy their position in the north was precarious, and the Játs of Bhukarheri and Belra attained to considerable power under the Patháns. Although, on the British occupation, the Sayyids recovered all or near all their old possessions, they were too much weakened to retain them, and even before 1803 many estates had left their hands. Of the 49 estates in the uplands nine were held by others than Sayyids in 1803, and within eight years of the conquest three estates were sold to the money-lenders of Landhaura for less than one year's revenue; and one estate, now valued at Rs. 60,000, was sold to the Sayyids of Jauli at the same time, and for the same cause, for Rs. 300; a fifth estate was mortgaged and was never recovered, and three more estates were mortgaged. By 1829-30 capitalists had gained a footing as mortgagees in nearly every Sayyid village in the north and west of the parganah. To the south, the powerful *mukararidárs* were able to trample out the rights of their poorer brethren, and, on the whole, the tendency continued to accumulate the land in the hands of a few persons.

In many instances the cause for this state of affairs can be traced to the pressure of the Government demand. Mr. Cadell writes:—"A comparison of the assessments, village by village, during the second settlement, 1808-09 to 1810-11, with those fixed by Mr. Thornton in 1841 leads me to think that in 15 estates out of the 49 now in the parganah the earlier assessments must have been heavy, and in 10 of these extremely heavy. One of these estates was transferred before the beginning of our rule, four within eight years of its commencement and three more within twelve, while in all the rest, with the exception of two, transfers more or less complete took place before 1237 fasli (1829-30); the bulk of the transfers however, especially in more recent times, have been due to causes very different from the incidence of the Government demand. It is true, no doubt, that in a dry parganah, in which well irrigation was almost

Causes for transfers.

unknown, and in which, therefore, before the opening of the canal the effects of constantly recurring droughts were felt in their full severity, a moderate assessment might in bad seasons, or after a succession of bad seasons, press most heavily upon the proprietary body. But independent of all other considerations, the reckless extravagance of Sayyid owners was of itself quite sufficient to occasion the numerous transfers of property which have taken place in the parganah, and transfers still continue notwithstanding the extremely moderate assessment now in force, and will no doubt go on among the comparatively few petty Sayyid landowners that are left. But whatever may have been the faults of the earlier assessments, there can be no doubt that for many years this parganah, looked upon as a whole, has been treated with marked consideration Up to 1841 the revisions of the settlement have been merely a redistribution over the various estates of the old demand of the parganah, and even the enhanced revenue of 1841 involved an increase of little more than ten per cent. over that fixed more than 30 years before. Since Mr. Thornton's settlement the Ganges canal has been constructed and a complete change has been made in the circumstances of the tract, which can hardly be said to have been adequately represented by the increase of Rs. 7,750, or 16 per cent., made to the Government demand of this parganah at the settlement in 1863." In the upland portion of the parganah the assessment of 1841 was, on the whole, a fair and moderate one, and the increase in 1863 was only on the old *mukararis* which had previously been held on merely nominal assessments.

Previous fiscal history.

The previous assessments of portions of the parganah have been collected by Mr. Cadell and exhibit some curious anomalies; they were as follows:—

Number of estates.	1206 fasli. 1798-99.	1207 fasli. 1799-800	1208 fasli. 1800-01	1216-18 fasli 1808-10.	1219-1222 fasli 1811-1814.	1233-37 fasli 1825-29.	1243-47 fasli 1835-39.	1248-68 fasli 1841-60.	1270-80 fasli 1862-72.	1872.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
32 estates, ...	16,504	18,657	11,267	31,106	30,726	29,305	29,431	33,007	38 278	50,981
6 ditto, ...	2,167	3.752	1,844	4,995	4,995	5,012	5,035	5,423	5 98	7,653
7 ditto, ...	...	...	...	1,904	3,044	4,387	4,237	5,736	7,050	9,348
Total 45 estates,	...	...	...	38,005	38,765	38,704	38,703	44,166	51,303	67,982

If the statements of the revenue before the British rule can be trusted, the enhancement effected at the first assessments was rapid and considerable and accounts in some measure for the transfers which followed the conquest, and for the inability of succeeding officers to raise the revenue. Some of the earlier assessments are perfectly incomprehensible: thus Rahmatpur paid sixty years ago nearly double what was deemed sufficient in 1841 and even in 1863, when it, a previously dry estate, had become fully irrigated. Other estates which secured large reductions thirty and forty years ago will only now, after

the great improvement which has taken place, again attain to the revenue which they paid at the very beginning of our rule, whilst others of the best Ját townships have paid all along and continue to pay still the high assessments with which they came under the British Government. Here as elsewhere, poor and outlying estates have profited by the general security to improve and have mainly yielded the increase to the revenue shown above. The enormous revenue paid by entirely unirrigated estates shows, in Mr. Cadell's opinion, that population, bringing with it high farming, has a greater effect upon rents than any rise which has taken place in prices. Notwithstanding the increase in irrigation many estates pay little more rental than that which was collected from them sixty years ago, and not two-thirds of the assessment, and all through the eastern portion of the district, backward estates are making up with the best villages, while the best estates appear to remain almost stationary.

Population.

According to the census of 1872, parganah Bhukarheri contained 54 inhabited sites, of which 16 had less than 200 inhabitants; 14 had between 200 and 500; 13 had between 500 and 1,000; seven had between 1,000 and 2,000; three had between 2,000 and 3,000; and one had between 3,000 and 5,000. The settlement record shows that there were 70 estates in 1863, of which 53 were inhabited and 17 were uninhabited.

The total population in 1872 numbered 39,573 souls (17,887 females), giving 309 to the square mile. Classified according to religion, there were 29,376 Hindús, of whom 13,097 were females and 10,197 Musalmáns, amongst whom 4,790 were females. Distributing the Hindu population amongst the four great classes, the census shows 1,723 Brahmans, of whom 747 were females; 1,263 Rajpúts, including 575 females; 1,303 Baniyas (566 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 25,087 souls, of whom 11,209 are females. The principal Brahman sub-division found in this parganah is the Gaur, numbering 1,723 souls. Gaur Rajpúts (1,255) predominate, and amongst the Baniyas, Agarwáls (1,231) and Saraugis are the most numerous. The other castes having more than one thousand members in this parganah are the Kahár (1,537), Chamár (7,974), Kháakrob (1,222), Ját (4,629), and Gújar (1,383). Amongst the Musalmáns, Shaikhs numbered 8,306 souls and Sayyids 1,516. A great part of the land at the time of settlement belonged to the Sayyids (25 estates); 14 estates to Mahájans besides shares, 5 to Játs, 4 to Shaikhs, one to Tagas, and 3 to Bohras. All, except the last, are hereditary proprietors. The cultivating population comprised Játs in 19 villages, Gújars in 10, Chauháns in 7, Jhojhas in two, Banjáras in two, and a mixed population in the remainder.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than 15 years of age), 294 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,920 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 882 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 5,669 in agricultural operations; 1,804 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,903 persons returned as labourers and 245 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 565 as landholders; 14,447 as cultivators, and 24,561 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 841 males as able to read and write out of a total male population numbering 21,686 souls. At the revision of parganah boundaries in 1842, the new parganah was made up of 40 original estates: five from parganah Muzaffarnagar, one from Jauli, two from Púr Chhapár, one from the Meerut district, and fourteen from Bijnaur. Subsequently the eroding action of the Ganges gave five more estates making 70 in all.

BHUKARHERI, a large village in the parganah of the same name in the Muzaffarnagar district, is distant 15 miles from the civil station. The population in 1865 numbered 4,649 souls, and in 1872 there were 4,697 inhabitants. The village of Bhukarheri has a small brick-paved bázár and a few good brick houses. There are four good wells having water at a depth of 40 feet from the surface with a depth of 31 feet in the wells. Around the site there are some large excavations which are used as receptacles for refuse, and some ruined mud huts serve a similar purpose. There is no external trade, the bazar being only sufficient to supply the wants of the small neighbouring agricultural communities. There is a road connecting the village with Barla and Deoband to the north-west and with Bijnaur across the Ganges. Markets are held here every Monday.

BHÚMA-SAMBALHERA, a parganah of the Jánsath tahsíl of the Muzaffarnagar district, is bounded on the north by parganah Bhukarheri, on the west by parganah Jánsath, on the east by the Ganges river, and on the south by the Meerut district. According to the census of 1872 this parganah had, then, a total area of 131 square miles and 320 acres, of which 70 square miles and 166 acres were under cultivation. The area assessed to Government revenue during the same year was 130 square miles and 320 acres, of which 69 square miles and 173 acres were cultivated, 35 square miles and 457 acres were culturable, and 25 square miles and 231 acres were barren.

General appearance.

Bhúma-Sambalhera may be divided into two tracts:[1] the uplands and the twenty-seven estates lying in the *khádir* or valley of the Ganges. The upland tract is, perhaps, the most continuous tract of sand in the whole district. One broad belt of sand runs down from the north, and branching out into two lines close to the town of Míránpur, runs southward until the sand plain is reached which extends in an unbroken line from the sand-hills three miles east of Muzaffarnagar, to the south-eastern boundary of the district. This sand plain enters this parganah from the north-west, and nowhere throughout its whole length is it more extensive. For the most part, however, the sandy area is level, and by slow degrees much of it will improve. And if the parganah with nearly half its area sand and nearly one-fourth more sandy loam is in this respect inferior to its neighbours, there is no tract in the district which can boast of finer land than the really good soils of the better villages, and there is none in which, notwithstanding the want of irrigation, the produce is better, the rent-rates higher, or the people more industrious and prosperous. It is a commonly expressed matter of wonder among the Sayyid landholders that their ancestors should have chosen for their home so unfertile a corner of Hindustan, but they may console themselves with the reflection that the unenviable character of their possessions has probably retarded their inevitable displacement by richer men. The wealthy purchasers who compete to buy land in the neighbouring parganahs have as yet shown no desire to extend their acquisitions in this direction, and the principal transferrees of Sayyid proprietary rights are small money-lenders and traders, for the parganah contains no large capitalists of its own, although its principal town, Míránpur, is a "*mandi*," or entrepôt of trade, where the products of the hills and the Tarái and the rice of Rohilkhand are exchanged for the salt of the Panjáb and the grain of the Duáb. It is not, however, necessary to account for the settlement here of the Sayyids by supposing any deterioration of soil or extension of sandy area of late years, for their destination was decided, in the first instance, more by necessity than by choice. When they came down from their temporary home in Patiála they had not attained the power and distinction which afterwards fell to their lot, though even then their employments, actual or prospective, about the imperial court rendered necessary a residence near Dehli. They had neither the strength nor the influence to eject the powerful tribes of Rajpúts, Játs, Gújars, and Mewatís who held the more convenient localities. In their present decadence and poverty they are mere burdens on the land, which is ill-qualified to support them. Nor are their shortcomings reduced in most cases by the industry and energy of the cultivators,

Uplands.

[1] The upland estates have a portion of their area in the khádir aggregating some 2,728 acres out of the 48,923 acres constituting the uplands of this notice which is chiefly based on the settlement reports.

In the southern portion, or old Bhúma parganah, there is certainly a fair admixture of Játs and Jhojhas; but to the north, in what was the Sambalhera parganah, the tillers of the soil are nearly all of the Gújar class. Some of these communities have only barely recovered from the heavy fines imposed on them for their disorderly conduct during the disturbances, and none combine both the means and the inclination to cultivate properly.

The khádir.

"The khádir, or alluvial tract which borders the right bank of the Ganges from the Saháranpur district to Garhmuktesar, in the Meerut district, is here," writes Mr. Grant in 1863, "from four to six miles broad. To the south it has received considerable accessions from the Bijnaur district by the change of course of the Ganges. At all times, the treacherous swamps and quicksands, the distance of villages from each other, the deficiency of a tenacious earth and the expense of bricks for houses, the constant inroads of wild animals on the crops, and, above all, the discomforts and dangers of the rainy season, will stand in the way of the colonization and development of this tract. The only class who disregard these evils and inconveniences are the Bijnaur Chauháns, who are easily attracted by advances of money and favourable terms of rent, but as readily disappear on the first appearance of pressure from the landlord. They are, even, too free from that hereditary feeling of attachment to the soil which is such a millstone round the neck of the upland cultivator, and it is only their unsuitability to a more settled mode of life which retains them in this neighbourhood. Though many of them are still to be found, their numbers were considerably diminished in the mutiny, and the southern part of the *khádir* is now much deserted. Three large villages were, among others, destroyed and looted by turbulent bands of Gújars. Though careless farming and an easily exhausted soil have always prevented anything like continuous cultivation in these estates, there was once a large, though scattered, area under the plough, and growing prosperity was teaching the villagers settled habits. But many of them disappeared, others were driven away, and the destruction of the accumulated profits of years has broken the tie which might have induced the remainder to cling to their homesteads."

Wild animals.

"The extraordinary increase in the number of wild pigs and deer since the disarming of the country is an evil which even strong measures will not quickly counteract, and the zamíndárs complain, with what justice cannot be said, that the fertility of the soil has been impaired by the recession of the Ganges to the eastward. Formerly it used to flood the whole of this tract, and its waters, going off rapidly, left behind them a fertilizing deposit. It is, at least, certain that the rice produced on the river bank is finer than that grown further from it. At present, almost the only returns from these estates are derived from thatching grasses. Of these, '*panni*,' a broad-bladed soft grass, is the best. It is also used for making brooms. The

other kinds are '*patel*' a fine needle-shaped soft grass, with a high stalk growing from the middle of each tuft; and the universally known '*kâns*.' The tall central stalks of the '*sarkora*,' called *bhind*, are used instead of bambus for thatching huts; string for beds is also manufactured from them. But it is a universal complaint that of late years thatching grass has not been so much in request as formerly. The reason is by some stated to be the prevalence of the custom of tiling in the cantonment of Meerut since the mutiny, while others attribute the slack demand to the universal growth of high grasses along the canal banks. Be the cause what it may, the fact is believed to be certain, and, except in lands lying on the river immediately opposite Bijnaur, these grasses do not generally meet with a ready sale. A few rupees are also made by granting permission to dig saltpetre. The central and northern portions of the *khádir* escaped with comparative impunity from the forays of the Gújars. The large estate of Husainpur contained, among other villages, a Gújar settlement known as Siáli, the inhabitants of which attacked and partially looted Husainpur, the principal place in this neighbourhood, and a halting-place for merchandize on the Meerut and Bijnaur road. The northernmost estates, always the best in this tract, have, however, thoroughly regained their former prosperous position."

Fiscal history.

The settlement under Regulation IX. of 1833 was made by Sir H. M. Elliot in 1835. The revision in 1863 was made by Mr. C. Grant, whose arrangements were disallowed, and Mr. A. Cadell was entrusted with the duty of "overhauling" the entire assessment of the upland villages, which he completed in 1873-74. The following statement gives the statistics of their revisions :—

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.		
					Irrigated.	Dry.	Total.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	a.	p.
1835, ... Uplands, ...	48,715	8,700	83	12,375	970	26,587	27,557	36,413	1	5	2
1835, ... Lowlands, ...	30,019	5,763	...	19,060	...	5,196	5,196	10,780	2	1	2
Total, ...	78,734	14,463	83	31,435	970	31,783	32,753	47,193	1	7	1
1848, ... All, ...	81,274	16,657	97	33,295	...	...	31,255	37,414	1	3	2
1863, ... Uplands, ...	42,863	9,210	80	5,302	8,125	26,146	34,271	35,719	1	0	8
1863, ... Lowlands, ...	31,322	3,626	...	20,752	58	6,886	6,944	9,987	1	7	0
Total, ...	80,185	12,836	80	26,054	8,183	33,032	41,215	45,706	1	1	9
1872, ... Uplands, ...	48,911	9,375	80	2,812	9,451	27,193	36,644	46,856	1	4	1
1872, ... Lowlands, ...	31,322	3,626	...	20,752	58	6,886	6,944	7,042	1	0	3
Total, ...	80,233	13,001	80	23,564	9,509	34,079	43,588	52,898	1	3	9
1875, ... Uplands proper, ...	46,195	8,192	52	1,659	9,497	26,795	36,292	...	...		
1875, ... Lowlands, ...	2,728	1,196	...	1,225	2	305	307	...	...		
Total, ...	48,923	9,388	52	2,884	9,499	27,100	36,599	45,856	1	4	1
Lowlands, ...	31,322	3,626	...	20,752	58	6,886	6,944	7,042	1	0	3
GRAND TOTAL, ...	80,245	13,014	52	23,636	9,557	33,986	43,543	52,898	1	3	6

The figures of 1872 are those of the rent-rate reports and those of 1875 are from the final corrected returns, and distinguish the *khádir* area of the upland estates from the uplands proper. As already noted, the marked peculiarity of the parganah is the prevalence of sand, which in the uplands alone covers 47·7 per cent. of the dry area, and in the division of the parganah into circles for the purposes of assessment, Mr. Cadell made due reference to the soils,[1] the facilities for irrigation, the state of cultivation and the character of the cultivators. His first circle comprised 16 villages, of which ten are mainly cultivated by Játs, one by Jhojhas, and the remaining five adjoin Miránpur. Játs, also, predominate in nine of the fourteen villages of the second circle, and Gújars in two, and in the third circle of 12 villages Gújars cultivate eight and are, as a rule, tolerably orderly and, for their caste, industrious. The crop statement for the year 1872 gives the *kharíf* area as 59¼ per cent. of the total cultivation, and in it cane covered 6·7 per cent. of the entire cultivated area; cotton, 3·2 per cent.; fodder crops, 6·5; *urd*, 7·3; *moth*, 11·2; and *bájra*, 16·7 per cent. In the rabi, wheat occupied 16 per cent. of the total area under the plough; gram, 3·3 per cent.; *gojai* or mixed wheat and barley, 9·7 per cent.; and barley, 9·2 per cent. Another element considered in the assessment was the area of land transferred and the price it fetched. Between 1842 and 1871, 18,138 acres, amounting to 22·7 per cent. of the total area, were transferred by private sale; 10,325 acres, or 13·1 per cent., by public sale; and 16,227 acres, or 20 per cent., by mortgage, giving a total of 55·8 per cent. of the total area. In the upland the price of land now averages about twelve times the revenue and has lately been higher at public than at private sales, and that this rate is lower than in other parganahs is chiefly due to the fact of the high assessment of the best villages, and that the other villages are either dry or are insufficiently irrigated.

Irrigation.

In former days, irrigation was practically unknown, and in the north or Sambalhera portion and the villages received from Bhukarheri, irrigation could only have been practised from masonry wells. To the south-west, however, in a few estates of Bhúma and in those transferred from Hastinápur, the soil is firm and earthen wells are practicable, and the irrigated area reached as much as 1,200 acres in 1835. Though the canal has done much for the parganah by means of the Bhukarheri rajbaha, it is as yet confined to the west and south, and some of the very best land has been left dry. Indeed the canal has done less for this than for any other upland parganah in the Ganges-Káli Duáb. The Anúpshahr branch of the canal runs at so low a level that only one small distributary is given out from it, but recent extensions will, it is hoped, fully provide for the wants of the whole parganah. In 1872-73 irrigation from canals, according to departmental returns, only reached 3,035 acres in this parganah. Still there can be no doubt

[1] The soils are given at page 351.

but that irrigation has added very much to the productiveness of the tract, while in those estates still dry, the slow increase of population and the advance in value of agricultural produce have improved the condition of the parganah. The deterioration of the Ganges *khádir* has induced the cultivators to devote all their energies to the upland estates, which, secure from flooding and the incursions of wild animals, form a fitter investment for capital and labour than the once fertile but now comparatively worthless valley estates.

Cultivation.

In the upland portion of the parganah, cultivation has increased from 27,557 acres in 1835 to 36,599 acres in 1872, and has absorbed not only a great portion of the fallow of the settlement in 1835, but has made a substantial inroad on the waste to the extent of 8,000 acres, or nearly 30 per cent. Any further progress in this direction must be slow, as nearly all the land now entered as culturable waste is either the worst sand or marsh-affected fields in the portions of the upland estates which slope down into the khádir. The deterioration of these latter lands is marked, and is apparently due to the improvement of the uplands, which has attracted to itself all the more industrious classes of cultivators, leaving the *khádir* proper to the migratory, thriftless Chauháns. Both these causes, with the addition of percolation from the canal, have operated to injure those villages situated on the edge of the upland which also possess a portion of the *khádir*.

The rent-rates assumed by Mr. Cadell for his circles were as follows :—

	Irrigated.			Dry.		
	Barah.	Loam.	Sandy loam.	Loam.	Sandy loam.	*Bhúr* or sand.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1st or Ghataen circle ...	12 0 0	6 6 0	4 14 0	3 12 0	2 7 0	1 8 0
2nd or Sambalhera	7 14 0	5 4 0	3 12 0	3 3 0	2 0 0	1 2 0
3rd or Nizámpur	...	4 8 0	3 3 0	3 0 0	1 11 0	1 0 6

These rates applied to the soil areas give a rental for the uplands of Rs. 95,246, or Rs. 40,470 in excess of the rental of 1835 and Rs. 23,950 in excess of the rental of 1863. Correcting this rental for the higher rates in some villages the increase may safely be set down at Rs. 30,000, of which about Rs. 10,000 may he ascribed as due to increased cultivation, Rs. 14,000 to increased irrigation, and the remainder to the rise in prices. The demand indicated by this rental was Rs. 47,633, while Rs. 45,856 was actually assessed, giving an increase of Rs. 10,137 over the assessment of 1863. The khádir villages were assessed at a reduction of Rs. 2,945, or Rs. 7,042 per annum, from 1281 *fasli* (1873-74 A.D).

Population.

According to the census of 1872 parganah Bhúma-Sambalhera contained 46 inhabited sites, of which 10 had less than 200 inhabitants; 14 had between 200 and 500; 12 had between 500 and 1,000; seven had between 1,000 and 2,000; one had between 2,000 and 3,000, and one had between 3,000 and 5,000. The only town is Míránpur with 5,924 inhabitants. The settlement record shows that there were 82 estates on the register in 1862. The total population in 1872 numbered 35,990 souls (16,602 females), giving 275 to the square mile. Classified according to religion, there were 27,190 Hindús, of whom 12,421 were females, and 8,798 Musalmáns, amongst whom 4,181 were females, and there were two Christians. Distributing the Hindu population amongst the four great classes, the census shows 2,047 Brahmans, of whom 937 were females; 488 Rajpúts, including 194 females; 2,492 Baniyas (1,203 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 22,163 souls, of whom 10,087 are females. The principal Brahman subdivision found in this parganah is the Gaur (1,760) The Rajpúts belong to the Gaur clan (414) and the Baniyas to the Agarwál (2,213) and Mahesri subdivisions. Amongst the other castes, the following show more than one thousand members in this parganah:—Chamárs, 7,058; Khákrobs, 1,292; Játs, 3,154 and Gújars, 2,140. Amongst the Musalmáns, Shaikhs number 7,274 and Sayyids show 1,277 souls. The distribution of the area amongst the land-owning classes has been given in the district notice as well as that of the cultivation amongst the agricultural classes.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 451 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,587 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 908 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 5,036 in agricultural operations; 1,660 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,235 persons returned as labourers and 289 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 708 as landholders, 13,147 as cultivators, and 22,135 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 743 males as able to read and write out of a total male population numbering 19,388 souls.

History.

Bhúma was an old Akbarí parganah, and in the time of Akbar the village of Bhúma was one of the chief villages of the Bárha Saadát. For a short time, during the British occupation,

it was eclipsed by the Gújar village of Bahsúma, and in 1842 the parganah of Bhúma, which had in 1816 only 13 villages, was added to the Muzaffarnagar district and joined to the old Akbari parganah of Sambalhera, which in 1816 comprised 16 villages. At the close of the re-arrangement of boundaries in 1855 the new parganah was re-constructed as follows:—From parganah Bhukarheri, 14 estates; from Jauli, 2; from Khátauli, 4; from Bhúma, 40; from Sambalhera, 11; from Hastinápur, in the Meerut district, 5; and from Bijnaur 10, making altogether 76 estates. In 1859 two more villages were added from Bijnaur by the eroding processes at work on the Ganges; one has since been swept away, one has been added by reclamation, and four by partition, giving 82 estates in 1862.

Sayyid losses.

The parganah owned almost entirely by Sayyids of the Chhatrauri branch of the Bárha Saadát shared the fortunes of that family, and during the early half of the past century attained to a great degree of prosperity. Though it contains Majhera, the earliest settlement of the Kundliwál branch, these have had little influence since the reign of Akbar, and by degrees the Chhatrauris overran the parganah, and with the exception of five Kundliwal and two Pathán villages, the whole parganah fell into their hands. During the latter half of the eighteenth century, much of their possessions passed away into the hands of Nain Singh, the Gújar chief of Bahsúma, and Rámdayál of Landhaura, and during the anarchy that then prevailed many of the Sayyids fled to Rohilkhand and Oudh and left their villages to the Gújars, the Pathán raiders from the east of the Ganges, and the Sikh marauders from the west of the Jumna. During the earlier years of British occupation, Nain Singh held nearly the entire parganah in farm, but on his death the villages were settled with the owners, and, in this manner, the Sayyids were restored. Year by year, too, the Sayyids who had emigrated returned, but some, unfortunately, after so long an interval that they never recovered the rights in the land which their ancestors had relinquished. Since the occupation, transfers have been numerous and, like as occurred in Khátauli and Muzaffarnagar, have been mainly due to the fact that the Sayyids have not been able to proportion their expenditure to their altered circumstances. The assessment, too, in such a dry tract pressed heavily in bad seasons and in some cases was very high, but the final enhancement does not seem to have been made until the estates had passed out of the hands of their Sayyid owners. In 1841, the Sayyids had only suffered severely in 16 villages, and in seven of these the transfers had been by mortgage, and they still possessed three-fourths of the parganah.

Notwithstanding the leniency of Sir H. M. Elliot's assessment in 1835-37, the Sayyid losses during its currency have been almost as numerous as during the period from the British occupation to 1835. Sayyid extravagance, here as

elsewhere, has led to these transfers and the loss of half the parganah; still the wealthier Sayyid families have been the chief purchasers, and next to them come the Ját cultivating communities, and if these latter had the power of combination in addition to the unflagging industry which they possess, they might have become owners of all the best estates which have left the hands of the Sayyids; as it is they have bought shares in five estates and Gújars have bought one. Mr. Cadell writes :—"In future such acquisitions are likely to be infrequent; the purchase of land in good estates is now, as a rule, beyond the power of the most well-to-do communities, and capitalists have obtained a footing in so many villages, that a would-be purchaser has to fight against the law of pre-emption as well as the enormously enhanced value of land in proportion to a tenant's profits. It is hard that an auction-purchaser of a few months' or years' standing should be able to bar the purchase of land by a man whose ancestors have lived upon that land for centuries, but there is no branch of law which has been more wrested from its original intention than the law of pre-emption, and in this respect the Ját cultivator is no worse off than the Sayyid landlord who frequently finds preferred to himself in his own ancestral village the most recent interloper." One marked result of the pacification of the country on the British occupation, both here and all through the Duáb, was the abandonment of the central fortified village site and the plantation of hamlets all through the area attached to the village, and hence a higher standard of cultivation, more manured and irrigated land and a permanent increase to the cultivating population. No longer harried by Sikhs and Rohillas, and with the old Sayyid proprietors again amongst them, the people began to bring back their abandoned fields into cultivation. As already stated, up to the second regular settlement, the parganah formed a portion of the farm of Nain Singh, but from that time onwards Mr. Cadell has collected the statistics of assessment for portions of the parganah as follows :—

No. of estates.	1219-22 fasli.	1223-27 fasli.	1228-32 fasli.	1233-37 fasli.	1238-41 fasli.	1242 61 fasli, 1835-54.	Last.
28	12,194	12,513	14,222	12,904	13,873	16,750	18,900
2	81	126	160	160	160	190	284
7	...	4,651	4,827	5,524	5,988	5,897	4,943
5	...	...	5,036	4,456	4,628	4,645	4,400
7	...	...	...	4,340	5,054	5,168	5,240
6	...	...	...	...	991	1,465	1,952

From these figures it will be seen that there has been no great or sudden enhancement since the occupation, and any change that there has been is due to the equalisation of the revenue in the settled villages and the colonisation and improvement of those which were uninhabited at the conquest. The high revenues of the Ját villages have not been increased and are still paid, for now they have

become moderate owing to the rise in prices and increase in irrigation. The best estates pay much about the same to Government which they did forty or fifty years ago, while the bad and poor estates of the time of the conquest are rapidly improving and approaching the first rank in the value of their produce.

BIDAULI, a parganah of the Shámli tahsíl of the Muzaffarnagar district, is bounded on the north by the Saháranpur district; on the west by the Jumna river, which separates it from the Panjáb; on the east by parganah Jhanjhána, and on the south by parganah Kairána. According to the census of 1872 this parganah had a total area of 86 square miles and 467 acres, of which 38 square miles and 64 acres were under cultivation. The area assessed to Government revenue during the same year was 81 square miles and 89 acres, of which 33 square miles and 550 acres were cultivated, 29 square miles and 268 acres were culturable, and 17 square miles and 550 acres were barren.

Physical features.

Bidauli lies in the extreme north-west of the district and has a peculiar character of its own. On the west it is subject to much diluvion from the action of the Jumna. Since the survey in 1832, six villages have been cut off and added to the Karnál district, and the river is annually eating more and more into the parganah[1]. More than one-half of the parganah is enshrouded in thick *dhák (Butea frondosa)* forests, used by the Gújar inhabitants as hiding-places for themselves and stolen cattle. There is no canal irrigation, but earthen wells can easily be sunk, and cost only from two to three rupees in the lands bordering on the Jumna and seven to eight rupees more inland. The wells ordinarily last only for one season, but sometimes for a year or more. There is little really good soil; the *mísan* only forms ten per cent. of the cultivated area, the *rausli* is of an inferior kind, and *bhúr* predominates. Hence wheat, maize and sugar-cane are poor, and the principal crops are *joár*, gram, *manduwa*, and cotton *(bári)*. The efflorescence of reh is strongly marked in the tracts near the Jumna, and renders large patches of land unculturable: in a week or ten days it will kill a most luxuriant crop. The villagers say that manure is fatal to it, but the use of manure is much neglected in this parganah. The inhabitants are principally Gújars and Rángars, with some Sayyids, a few Játs, Rorhs, and Patháns.

Fiscal history.

The former settlement was made by Mr. E. Thornton and the new one by Messrs. Colvin and Keene. Mr. Colvin writes:—

"Bidauli has long been known as one of the most unsatisfactroy parganahs in the district. For many years it has been suffering from over-assessment, but the troubles of 1857-58 and the famine of 1861 have reduced it to a very bad condition. The parganah was once thickly inhabited by Sayyids, whose descendants still cling to it, though impoverished and almost beggared, and there are not wanting signs of its former prosperity. Some village

[1] See new Set. Rep., pp. 98, 117, 120, 125.

sites show evident traces of having formed the centres of considerable life ; in almost every village is to be found the decaying fort of some decayed family. Wells constructed of masonry are abundant; but, while the old wells have been neglected, few new ones have been built. There were 929 at the last settlement. There are now 1,030, but 113 have been allowed to fall out of order. In 1860-61 there were 294 *kuchcha* wells. Little by little the population has sunk away, as the settlement of 1838 became more and more intolerable. Most of the Sayyid proprietors have long since declared themselves insolvent, and allowed their estates to be made over in farm to the resident villagers. These in their turn have absconded; then the village has been farmed by neighbouring cultivators, who, again, in a year or so have declared themselves unable to meet the Government demands; and so, for a longer or shorter period, the village has been thrown back into the hands of Government. The inhabitants, finding that even active cultivation will barely meet the revenue, have, as a rule, ceased to interest themselves in agriculture. The Nawáb Ahmad Ali Khán of Karnál is content to pay the Government demand and see his lands lie waste; while Sayyid Mahdi Hasan of Bidauli (lately in the service of the former king of Oudh), attempting to induce a better class of cultivators to enter the parganah, was met with such resistance by the Gújars and Rángars that, unable to keep his Játs in comfort and security, he was obliged to let them go. Distress, as might be expected among such a population, has had its usual effects. The Gújars and Rángars, naturally thieves, have been further demoralized by pinching circumstances. Even the better-disposed classes, such as Sayyids and Patháns, finding they could scarcely wring out an honest livelihood, have been found to enter heartily into the cattle-lifting of their neighbours."

Mr. Edwards.

Mr. Edwards also, in writing of Bidauli, calls it " perhaps the worst in the district. The soil is generally bad, and if rain falls in excess, the crops rot on the ground and the land becomes a sticky swamp. If, on the other hand, there is a scarcity of rain, it yields no return ; the seeds fail to germinate. * * * The settlement, it is evident, broke down in several villages at least twelve years ago, since which time village has propped up village; and an adjoining community, if thriving, has been called up on to aid its sinking neighbours in meeting their engagements. The arrangements were left in the hands of the tahsíldár, who portioned out the lands to be cultivated partly among the people of the village, but the greater portion among those of the surrounding villages, each being held liable for a quota of the Government revenue. This strange and irregular practice appears to have been generally acquiesced in by the people, and it is difficult to see how, without revision, the Government revenue could otherwise have been realized, inasmuch as the severity of the assessment virtually precluded sale or farming leases. Nobody would have anything to do with villages when there was an annual deficit, where the

soil was so inferior that the land which yielded a crop one year must be left fallow the next, and where the population was mainly, if not entirely, Gújar, and scanty in number." Mr. Keene notes that the land-revenue in 1862 was quite nominal, and the balances showed how heavily it then pressed upon the people. These balances were not due to the drought of 1860-61, for "owing partly to the scanty population and partly to the fact that there is scarcely any cultivated land that is not dependent on the vicissitudes of the seasons, the drought of 1860-61 did not bear severely on this parganah." Statistics show that the whole difference between the produce-value in an ordinary year and in a year of drought did not exceed eight per cent., and this was principally due to the emigration of the cultivators.

Transfers.

The transfers from 1841 to 1861 amounted to 13,279 acres, or over 22 per cent. of the total area. Of this Sayyids lost 7,961 acres, Gújars 2,001 acres, and Rajpúts 1,435 acres. The Sayyids recovered the greater proportion of their losses, buying in 7,784 acres of the total area transferred. There is not a single mart in the whole parganah, and many villages have not only bad roads, but, during a great part of the year, swollen streams between them and their markets. The area statistics show that during the currency of the late settlement cultivation had fallen off by 17 per cent. and the assessment was, therefore, lowered by 23 per cent. Some misapprehension existed as to whether the term of settlement was ten years or twenty years as in the remainder of the district, but it has recently been ruled that twenty years should be accepted as the term intended by Government. The new assessment has been levied since 1862-63. From Mr. Palmer's report in 1872 it is gratifying to observe that this parganah is improving rapidly. The Gújars are now taking to agricultural pursuits, cultivation is increasing in their villages, there is less recourse to the money-lenders, sales are infrequent and redemptions of mortgage very common. This result justifies the moderation in the Government demand, which has converted a rapidly deteriorating tract into one where every mark of progress is visible.

Land-revenue.

The following statement shows the statistics of the land-revenue at the past and present settlements:—

Year.	Total area.	Barren.	Revenue-free.	Culturable.	*Cultivated.*			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
1841, ...	54,005	7,662	3,925	17,611	...	...	24,807	37,905	1 8 5
1862, ...	55,616	11,101	3,425	20,546	14,068	6,476	20,544	29,125	1 6 8
1863, ...	55,224	11,101	3,033	20,546	14,068	6,476	20,544	29,125	1 6 8

The difference between the census statistics of 1848 and those now given for 1841 is due to diluvion caused by the Jumna: the villages transferred to Karnál being omitted from the returns now given. Cultivation in 1872 reached 21,726 acres. According to the census, the land-revenue for 1872 amounted to Rs. 29,286 (or with cesses, Rs. 34,416), falling at a rate of Re. 0-8-5 per British acre on the total area, at Re. 0-9-0 per acre on the area asssessed to Government revenue, and at Re. 1-3-3 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 55,703.

Population.

According to the census of 1872 parganah Bidauli contained 50 inhabited sites, of which 19 had less than 200 inhabitants; 17 had between 200 and 500; 10 had between 500 and 1,000; two had between 1,000 and 2,000; one had between 2,000 and 3,000; and one had between 3,000 and 5,000. The settlement record shows that there were 54 estates on the register in 1863. The total population numbered 23,263 souls (10,371 females) in 1872, giving 267 to the square mile. Classified according to religion, there were 13,690 Hindús, of whom 5,960 were females, and 9,578 Musalmáns, amongst whom 4,411 were females. Distributing the Hindu population amongst the four great classes, the census shows 917 Brahmans, of whom 396 were females; 44 Rajpúts, including 11 females; 1,199 Baniyas (545 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 11,530 souls, of whom 5,008 are females The principal Brahman sub-division found in this parganah is the Gaur, who number 890 souls. The Baniyas are chiefly Agarwáls, and amongst the other castes numbering more than 500 members are found the following:—Kahárs, 1,684; Chamárs, 1,678; Mális, 771; Khákrobs, 1,346; Játs, 1,499; and Gújars, 1,450. The Musalmáns show Shaikhs, 7,904, and Sayyids, 1,166. At the settlement in 1862 the proprietary body comprised Gújars, who held 11,656 acres; Játs, with 6,387 acres; Sayyids, 9,079 acres; Patháns with 1,673 acres; and Tagas, Mahájans, Shaikhzádahs, Brahmans and others with smaller holdings.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 81 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 988 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 497 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 4,174 in agricultural operations; 1,007 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 1,135 persons returned as labourers and 273 as of no

specified occupation. Taking the total population, irrespective of age or sex, the same returns give 898 as landholders, 10,401 as cultivators, and 11,969 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 447 males as able to read and write out of a total male population numbering 12,897 souls. Bidauli is an old Akbari parganah of the Saháranpur sirkár, but there have been numerous interchanges with the adjoining parganahs and several of the villages have been cut off by the Jumna and added to Karnál. In 1840-41 two villages were received from Nakúr and two from Chaunsat Kheri in the Saháranpur district

BIDAULI, the chief village of the parganah of the same name in the Muzaffarnagar district, is distant 36 miles from the civil station. The population in 1872 numbered 3,663 souls The Chaukidári Act (XX. of 1856) is in force in Bidauli and supports a village police force numbering eleven men at an annual cost of Rs. 636. The total income from all sources in 1872-73 was Rs. 1,657, giving an incidence of Re. 0-4-7 per head of the population and Re. 1-7-9 per house. During the same year the number of houses assessed was 713 and the expenditure was Rs. 1,633. Bidauli lies on the route from Meerut to Karnál and is distant 13 miles from Shámli and 11 miles from Karnál. The road from Shámli to Bidauli is described under Shámli *(q. v.)* Hence to Karnál the road passes through a country covered with *dhák* jungle; it is tolerably good and crosses an unbridged nála at 2¾ miles; Manglaura at three miles; thence across the Jumna by a bridge-of-boats in the dry season and a ferry in the rains. There is a first-class police-station and a branch post-office here. Bidauli is the seat of the Jagneri branch of the Bárha Sayyids, for an account of whom see the district notice under "history."

BUDHÁNA or Burhána, a town in the parganah of the same name in the Muzaffarnagar district, is distant 19 miles from Muzaffarnagar. The population in 1847 was 5,559; in 1853 was 6,750, and in 1865 was less than 5,000. There were 6,162 inhabitants in 1872, of whom 3,867 were Hindús (1,801 females) and 2,295 were Musalmáns (1,175 females). This town is situated on the right bank of the Hindan river and contains a fair proportion of substantial brick-built houses on a raised site, with good drainage by the ravines towards the river. The outer walls of the houses adjoin each other so as to form a kind of fortification, and the town itself is entered by four openings called gates. To the north the site is bounded by the sandy bed of the Hindan, and on the west and south there is an almost continuous belt of mango trees. On the east there is a tract of low land forming a portion of the bed of the Hindan which is submerged in time of flood. The water in wells in this low tract is found at a depth of 30 feet from the surface, and in the bázár, in March, 1869, the water was 48 feet from the surface and five feet in depth, with a rather unpleasant taste and of a dull colour.[1] Ague and

The site.

[1] See Cutcliffe's report, appendix xlix.

malarious fever prevailed in 1869, though at that time there was no irrigation nearer than ten miles. The Chaukidári Act (XX. of 1856) is in force, and in 1872 supported a police force of 16 men at a cost of Rs. 906, besides a staff of sweepers. The total income from all sources in 1872-73 was Rs. 2,084, giving an incidence of Re. 0-3-6 per head of the population and Re. 1-0-0 per house. During the same year the number of houses assessed was 1,203 and the expenditure was Rs. 1,927. There is a first-class police-station and a branch post-office here. During the mutiny, the old fort of Budhána was taken and garrisoned by Khairáti Khán of Parasauli, assisted by the Jaula people. It was again captured on the 15th September, 1857.

BUDHÁNA or Burhána, a parganah in the tahsíl of the same name in the Muzaffarnagar district, is bounded on the north by parganah Shikárpuá and partly by parganah Shámli; on the west by parganah Kándhla; on the east by part of parganah Khátauli, and on the south by the Meerut district. According to the census of 1872 this parganah had a total area of 79 square miles and 480 acres, of which 57 square miles and 358 acres were under cultivation. The area assessed to Government revenue during the same year was 78 square miles and 147 acres, of which 56 square miles and 205 acres were cultivated, 8 square miles and 633 acres were culturable, and 12 square miles and 589 acres were barren.

Physical features.

Budhána lies to the south of the district and its eastern half falls within the delta formed by the confluence of the West Káli nadi with the Hindan which takes place at Riauli Nagla in this parganah. As might be supposed, the tendency of the drainage is to cut ravines into the basin of these rivers, which gradually eat into the heart of the best lands. The sub-soil is firm and *kuchcha* wells can easily be made, the water being about 36 feet from the surface in the uplands and about 24 feet from the surface in the *khádir* of the two rivers. These lowlands are occasionally irrigated from the rivers and produce fair crops of sugar, maize, and wheat. Mr. Trevor Plowden formed the settlement under Regulation IX. of 1833 of the greater portion of this parganah: the remainder was assessed by Messrs. Glyn and Elliot. The severity of the previous revenue whilst the parganah formed a portion of the Sumru *jágír* is noticed under parganah Sardhana of the Meerut district. Budhána, however, fared better than the other parganahs of the *jágír* from the Begam's Díwán being a resident and hereditary chaudhri of the parganah. Mr. Plowden's assessment was by no means a light one, ranging from Re. 1-10-10 to Rs. 4-7-8 per acre. On this account the parganah suffered badly in the drought of 1860-61, "so much so that the people have taken the idea into their heads that the locality is accursed on account of their misconduct." The old settlement[1] was apparently

[1] Set. Rep., 238. In 1870, Mr. Cadell recommended only eight estates for permanent settlement in this parganah.

based upon the average collections of twenty years preceding the lapse of the parganah. Mr. Keene, who assessed the parganah in 1862, took a parganah rental of Rs. 1,36,385, derived from the application of Mr. Thornton's averages and the ascertained rates for land paying rent in cash, as the basis of his assessment, giving an all-round rate on cultivation of Re. 1-14-11½ per acre. Cultivation has increased by 1,614 acres only, or 4·8 per cent. As the parganah depended so much on irrigation from wells and on the industry of the cultivators, a light assessment was deemed necessary, though it would appear that the demand has been made too light. From 1841 to 1861, 5,677 acres, or about one-ninth of the total area, changed hands by private transfer or under orders of the civil courts, and 3,336 acres were confiscated on account of rebellion. Rajpúts lost 1,603 acres, Játs 1,184, and Afgháns 1,139 acres. The principal purchasers were the same classes and Mahájans; these last purchased 1,987 acres and Rajpúts bought back 1,206 acres. In 1861, the principal proprietary bodies were Rajpúts, Játs, Patháns, Tagas, and Gújars.

Land-revenue.

The following statement shows the statistics of the land-revenue at the past and present settlements and at Mr. Cadell's revision in 1870:—

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs. a. p.
1848, ...	50,492	10,280	219	6,327	...	...	33,666	69,116	2 0 0
1863, ...	51,074	8,423	818	6,521	18,518	16,764	35,282	69,846	1 15 8
1870, ...	51,774	8,572	...	6,628	81,708	17,766	35,874	71,146	1 15 9

The land-revenue for 1872, according to the census, amounted to Rs. 70,839 (or with cesses, Rs. 81,974), falling at a rate of Re. 1-6-3 per British acre on the total area, at Re. 1-6-8 per acre on the area assessed to Government revenue, and at Re. 1-14-9 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 1,86,591.

Population.

According to the census of 1872 parganah Budhána contained 43 inhabited sites, of which 4 had less than 200 inhabitants; 13 had between 200 and 500; 13 had between 500 and 1,000; 9 had between 1,000 and 2,000; 2 had between 2,000 and 3,000; and one had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Budhána itself with 6,162. The settlement records show 44 estates in 1862. The total population in 1872 numbered 41,575 souls

(19,069 females), giving 519 to the square mile. Classified according to religion, there were 29,254 Hindús, of whom 13,362 were females, and 12,321 Musalmáns, amongst whom 5,707 were females. Distributing the Hindu population amongst the four great classes, the census shows 2,522 Brahmans, of whom 1,158 were females; 1,550 Rajpúts, including 624 females; 2,961 Baniyas (1,335 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 22,231 souls, of whom 10,245 are females. The principal Brahman subdivision found in this parganah is the Gaur, numbering 2,369 souls. The Rajpúts belong to the Gaur (188), Kachhwáha and Chhotiyána clans, and the Baniyas to the Agarwál (2,961) subdivision. Amongst the other castes the principal are the Taga (988), Kahár (2,478), Chamár (4,613), Garariya (788), Juláha (622), Kumhár (676), Hajjám (580), Khákrob (1,591), Ját (3,961), Gújar (317), and Saini (1,116). The Musalmáns comprise Shaikhs (11,109) and Mughals (457).

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 273 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,536 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,483 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 6,277 in agricultural operations; 1,919 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,069 persons returned as labourers and 514 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 2,142 as landholders, 14,301 as cultivators, and 25,132 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,312 males as able to read and write out of a total male population numbering 22,506 souls. Budhána is an old Akbari parganah, received from Meerut in 1842. There have been several interchanges with neighbouring parganahs, and in 1840-41, one village assessed at Rs. 1,200 was received from parganah Saháranpur in the Saháranpur district.

BUTRÁRA, a small village in parganah Shámli of the Muzaffarnagar district, is distant 17 miles from the civil station. The population in 1872 numbered 1,347 souls, and there is an out-post of police here.

CHARTHÁWAL, a town in parganah Charthawal of the Muzaffarnagar district, is distant 7 miles from Muzaffarnagar. In 1847 the population was 5,111; in 1853 there were 6,467 inhabitants, and in 1865 there were less than 5,000. The population in 1872 numbered 5,121 souls, of whom 3,209 were Hindús (1,493 females) and 1,912 were Musalmáns (904 females), occupying 1,232

houses. Act XX. of 1856 (the Chaukidári Act) is in force, and in 1872 supported a village police numbering fifteen men of all ranks at an annual cost of Rs 876, besides a few scavengers. The total income from all sources in 1872-73 amounted to Rs. 1,410, giving an incidence of Re. 0-4-1 per head of the population and Re. 1-7-10 per house assessed (896). During the same year Rs. 1,511 were expended, a great proportion of which was on works of public utility connected with the sanitation of the town. There is a second-class police-station and a branch post-office in Charthawal. Friday is bazar day. The inhabitants are chiefly Hindús. The soil around the site is light and porous with a sandy subsoil, yielding wheat and millets. To the west runs the Hindan at a distance of three miles, and on the east the Káli, at a distance of five miles. Masonry wells supply water for drinking purposes, with an average depth from the surface of 15 to 20 feet. In most of them it is sweet and good, though some are brackish. The drainage runs off to the Káli nadi, but there are numerous holes about the site "reeking with foul and stinking mud." There has been much fever in the town, but less than the average of the parganah. All irrigation water is drawn from wells. Charthawal is now a small agricultural town, but was once the residence of an *amil*.

CHARTHÁWAL, a parganah of the Muzaffarnagar tahsíl of the same district, is bounded on the north by the Saháranpur district, on the east by parganah Muzaffarnagar, on the south by parganah Baghra, and on the west by parganah Thána Bhawan. According to the census of 1872 this parganah had a total area of 91 square miles and 166 acres, of which 69 square miles and 493 acres were under cultivation. The area assessed to Government revenue during the same year was 91 square miles and 156 acres, of which 69 square miles and 185 acres were cultivated, 11 square miles and 455 acres were culturable, and 10 square miles and 156 acres were barren.

Physical features.

The Hindan flows from north to south through the western portion of the parganah, and between it and the Káli on the east the land is high, but naturally fertile. Water is found here at a great depth; masonry wells are scarce, and *kuchcha* wells are expensive and seldom last more than two years. Except in bad years cultivation is careful and abundant. The villages lie far apart, but are large and substantial. To the west of the Hindan there is a canal distributary running parallel to the river, and the villages near it are thriving. A road runs from Jalálabad by Thána Bhawan through the parganah to Muzaffarnagar, crossing the Hindan by a ford which is passable except after heavy rain, and the Káli by a masonry bridge.

Fiscal history.

The settlement of this parganah under Regulation IX. of 1833 was made by Mr. E. Thornton in 1841 and expired in 1861. The revision was made by Mr. A. Colvin in 1862, who maintained the division into circles made by his predecessor, adding one more for

the villages beyond the Hindan. With the exception of Charthâwal itself, Rasúlpur and Sayyidpur belonging to Sayyids and Bambela over-assessed, none of the villages in this parganah suffered during the last settlement, and the introduction of the canal has had a great share in its prosperity.[1] In the new settlement Mr. Colvin estimated the increase of revenue due to the canal as Rs. 3,204. Charthâwal suffered much during the famine of 1860-61. Mr. Keene calculated the number of emigrants at 6,745, and remarked that a traveller in passing through the parganah "cannot fail to be struck with the wide-spread desolation of the villages and the desert aspect of what once were fields." All these circumstances combined to preclude any great increase in the revenue demand, but since then the parganah has advanced rapidly in prosperity. The transfers during the currency of the past settlement amounted to 21 per cent. of the total area: 5,199 acres were conveyed by private sale; 5,104 acres by orders of the civil courts, and 1,934 acres were confiscated for rebellion. By sale alone Sayyids lost 5,458 acres, Rajpúts lost 2,581 acres, and Tagas lost 1,450 acres. The money-lenders were the chief purchasers. Mahájans and Khattris obtained 5,865 acres. Tagas, Rajpúts, Sayyids and Játs form the bulk of the proprietary body at the present time.

Transfers.

The following statement shows the statistics of the land-revenue at the past and present settlements and the figures given in Mr. Cadell's revision in 1870:—

Land-revenue.

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs a. p.
1848, ...	58,092	9,540	1,774	7,192	...	...	39,586	63,790	1 9 9
1862, ...	59,044	6,659	539	7,497	15,173	29,176	44,349	61,257	1 6 1
1870, ...	59,044	6,659	539	7,497	15,174	29,175	44,349	61,636	1 6 0

The land-revenue for 1872, according to the census records, amounted to Rs. 61,856 (or with cesses, Rs. 71,716, falling at a rate of Re. 1-0-9 per British acre on the total area, at Re. 1-0-11 per acre on the area assessed to Government revenue, and at Re. 1-6-2 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 1,29,092.

According to the census of 1872, parganah Charthâwal contained 55 inhabited sites, of which 10 had less than 200 inhabitants; 20 had between 200 and 500; 18 had between

Population.

[1] Still Mr. Cadell could not recommend any of the estates for permanent settlement.

500 and 1,000; 5 had between 1,000 and 2,000, and one had between 2,000 and 3,000. Charthâwal itself has 5,121 souls. The settlement records show that there were 66 estates in 1863. The total population in 1872 numbered 34,930 souls (15,562 females) in 1872, giving 380 to the square mile. Classified according to religion, there were 24,917 Hindús, of whom 10,967 were females and 10,013 Musalmáns, amongst whom 4,595 were females. Distributing the Hindu population amongst the four great classes, the census shows 2,281 Brahmans, of whom 1,011 were females; 3,050 Rajpúts, including 1,131 females; 1,393 Baniyas (621 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 18,193 souls, of whom 8,204 are females. The principal Brahman subdivision found in this parganah is the Gaur, numbering 2,178 souls in 1872. The Rajpúts belong to the Gaur (304), Pundír and Chhonkar clans, and the Baniyas to the Agarwál (1,361) subdivision. Amongst the other castes the principal are the Taga (2,177), Kahár, Chamár (4,785), Gararíya (905), Juláha (788), Jogi (618), Khákrob (1,167), Ját (971), and Saini (750). The Musalmáns are distributed amongst Shaikhs (9,456), Sayyids (314), and Mughals (27). The chief agricultural castes are Tagas on the eastern highland and Rajpúts towards the Káli and the Hindan.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 458 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,128 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 646 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 5,730 in agricultural operations; 1,611 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,419 persons returned as labourers and 287 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 480 as landholders, 13,985 as cultivators, and 20,465 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 515 males as able to read and write out of a total male population numbering 19,368 souls. Charthâwal is an old Akbari parganah, much changed in area by transfers to and from the neighbouring parganahs. In 1840-41 three villages were received from Deoband, one from Jaurási, fifteen from Thána Bhawân, and one from Chaunsat Kheri in the Saháranpur district, having an aggregate assessment of Rs. 17,515.

CHAUSÁNA, a village in parganah Bidauli of the Muzaffarnagar district, is distant 33 miles from the civil station. The population in 1872 numbered 2,567

souls. There is a second-class police-station and a branch post-office here. This village is the head of a Rajpút *chaubísi*.

CHHAPÁR, a large village in parganah Púr Chhapár of the Muzaffarnagar district, distant 9 miles from the civil station. The population in 1865 numbered 2,300 souls and in 1872 was 2,634, mostly Hindu and Musalmán Tagás. The inhabitants have suffered much from fever. The water in the principal well was 15 feet from the surface in March, 1869, with 30 feet of water, and was said to have contained only 12 feet of water before the introduction of the canal, to which no doubt a portion of the unhealthiness prevalent in Chhapár must be attributed. There is a small bazar, but the village is essentially agricultural, housing from two to three thousand head of cattle every night. There is a branch post-office here.

DEHRA, a station of the Great Trigonometrical Survey, is situated in parganah Deoband, in the Saháranpur district, just outside the boundary of the Muzaffarnagar district, in lat. 29°-37′-40″ and long 77°-39′-23″, at an elevation of 893·1 feet above the level of the sea. The upper markstone of the station is situated in the village of Dehra, 1·5 miles south-west of the village of Rankanda, 0·5 mile north-east of Kasauli, and 0·9 mile north-north-east of Jakwála. This height was deduced trigonometrically.

DHARMPURA, a small village in parganah Bhúma Sambalhera of the Muzaffarnagar district, is distant 31 miles from the civil station. The population in 1872 numbered only 195 souls, and it is only noticed as containing an outpost of police.

GADHI DÚBHAR or Garhi Dúbhar, also known as Garhi Miyán Bhái Khán, a village in parganah Jhanjhána of the Muzaffarnagar district, is distant 23 miles from the civil station. The population in 1865 numbered over 2,700 souls, and in 1872 there were 2,417 inhabitants, amongst whom are a large number of the relations and clansmen of the Bilúch zamíndár. The site of Gadhi Dúbhar is somewhat raised and lies about a mile and a half to the west of the eastern Jumna canal, but between it and the canal the land lies low and retains a considerable quantity of water during the rains which finds an exit under the canal. The well-water in this low tract is good and is found at a depth of twelve feet from the surface; in the town it is somewhat brackish and sinks to twenty feet. There are several fine groves of trees around the town, and to the west there is a canal channel. The roads are in part paved with brick, and meet in the middle of the village, where there is a large well. Many of the houses are brick-built and of two storeys, but of these some are now in ruins. There are six masjids. A bazar is held every day and a market on Sundays. There are many Baniyas resident and a fair trade is carried on in sugar and salt. The smaller lanes are very badly kept and are very uneven and full of holes which form receptacles for mud and refuse. Little regard is had for

cleanliness, and in all the open spaces and among the ruined houses, heaps of manure are to be met with, which with the increased moisture caused by the rise in the water-level must be considered the proximate causes of the malarious diseases found to prevail so universally in this village.[1]

GANGERU, a town in parganah Kándhla of the Muzaffarnagar district, is distant 35 miles from Muzaffarnagar. Gangeru had 5,117 inhabitants in 1872, of whom 2,613 were Hindús (1,158 females), chiefly Gújars, and 2,504 were Musalmáns (1,130 females). Gangeru is a straggling place of many brick ruins, but the site is fairly raised, and though there are many undrained water-holes and little attention is paid to cleanliness, there is little fever here. There is a canal channel to the east of the town and another runs about one mile to the west. Gangeru was the chief town of a small parganah containing only two villages in 1816.

GORDHANPUR, a parganah of the Muzaffarnagar tahsíl and of the same district, is bounded on the north by the Saháranpur district, on the west by parganah Púr Chhapár, on the east and south-east by the river Ganges, and partly on the south by parganah Bhukarheri. According to the census of 1872 this parganah had a total area of 74 square miles and 256 acres, of which 22 square miles and 198 acres were under cultivation. The area assessed to Government revenue during the same year was 74 square miles and 25 acres, of which 22 square miles and 198 acres were cultivated, 37 square miles 13 acres were culturable, and 14 square miles and 454 acres were barren. Gordhanpur is unfortunately situated on the east, where it is encroached upon by the Ganges, and it is swamped on the west by the Soláni.

Physical features.

In time of heavy rain, Gordhanpur is cut off from all communication with the rest of the district, and to enter it requires a detour through the southern part of Saharanpur. Mr. Keene, who made the assessment in 1862, divides the parganah into four tracts.[2] One consists of the estates cut by the Ganges or its tributary streams, and a second of the swampy land along the Soláni. The small inverted oasis of high land between the rivers formed two more divisions. Much of the loss caused here by diluvion and over-saturation is preventible, and in 1865-72 efforts were made towards draining a portion of the swampy tract *(choel)* that has been caused by percolation from the Ganges canal. The whole tract is occupied almost exclusively by Gújars, "but they are of comparatively inoffensive habits;—only the same lack of energy which is shown in their crimes unfortunately also exhibits itself in their cultivation. They have no want of water, but are otherwise badly off, and eke out a subsistence by selling straw for thatch, and by grazing

[1] See Cutcliffe's Report, App. xli.

[2] See new Set. Rep., 93, 117, 140. Twenty nine villages are subject to percolation in this parganah. Thirty-five estates here and five estates of Púr Chhapár were under direct management on this account in 1874.

herds of cattle, which pay a tax of four to six annas per head," known as *dumchi* or tail-money. Much of the land now lying uncultivated as incapable of bearing so much as one crop during the year will be made to yield crops whenever the demand for agricultural produce and the redundance of the labour market shall render it worth the while of the landholders to reclaim it by draining. In regard to the remainder of the uncultivated area it has been found that though the winter sun is not of sufficient power to dry it or to fecundate the seed for the *rabi* crop, yet in seasons of scanty or late rain-fall it produces fair crops of *munji* rice. Several attempts have been made to drain these areas of swamp by the people themselves, but, owing to the want of proper levels, their efforts have been unsuccessful. Thousands of acres of fine soil are thus subject to a rapid and growing deterioration. Mr. Keene found the old revenue rates falling at Re. 1-4-6 on the cultivated area and Re. 0-10-9 on the total assessed area, with a land revenue of Rs. 19,623. He proposed Rs. 19,478 as the new revenue, which from the increase of cultivation (15,447 to 16,000 acres) has caused the revenue-rate to fall to Re. 1-3-7¼ on the cultivated acre. Portions of this assessment were cancelled by order of Sir W. Muir in 1868, and Mr. A. Cadell was instructed to report on the entire parganah. During the settlement of 1862 it was found that from 1841 to 1861 transfers amounting to 6,642 acres, or 15·3 per cent. of the total area, had taken place. Gújars lost 4,635 acres; Afgháns, 265, and other castes the remainder. Gújars and Mahájans were the principal purchasers, the former recovered 2,036 acres and the latter became the proprietors of 1,501 acres.

Land-revenue,

The following statement shows the statistics of the land-revenue at the past and present settlements:—

	Total area.	Cultivated.			Culturable.	Revenue-free.	Barren.	Revenue.	Rate on cultivated acre.
		Wet.	Dry.	Total.					
1841.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Uplands, ...	22,259	...	8,881	8,881	8,829	...	4,549	11,040	1 3 11
Lowlands, ...	22,870	...	7,797	7,797	6,871	...	8,202	9,326	1 3 2
Total, ...	45,129	...	16,678	16,678	15,700	...	12,751	20,.66	1 3 6
1863.									
Uplands, ...	23,502	728	9,122	9,850	10,533	...	3,119	11,641	1 2 11
Lowlands, ...	23,704	140	6,036	6,176	10,762	...	6,766	5,761	0 14 11
Total, ...	47,206	868	15,158	16,026	21,295	...	9,885	17,402	1 1 6

The lowlands include the six estates from Bhukarheri and the 33 estates of Gordhanpur which have been formed into what is known as the *choel* circle, and

have yearly assessments which amounted to Rs. 4,694 in 1281 *fasli* (1873-74 A.D.) The villages received from Bhukarheri are, Ilmawála, Jogawála, Faridpur, Zindawála, Kánewáli and Shahdera, having a total area of 6,087 acres, of which 1,816 acres were barren and 4,271 acres were assessable. The six wholly *khádir* villages proposed for transfer from Púr Chhapár to this parganah are Bahmanwála, Saheli, Shamsnagar, Sherpur, Kálawála, and Mandanwála.

Some misapprehension was felt as to whether the assessment of the uplands should stand for twenty years, as in the other parganahs, or for only ten years, as recommended by Mr. Martin. This question has not yet been decided. In 1872, out of 75 estates, 35 were held under direct management owing to percolation, and the settlement officer recommended the addition of seven more to the list and the revision of the assessment in five villages affected by the Bánganga. These with six estates of Púr Chhapár similarly deteriorated by fluvial action, and which, it is proposed, should be transferred to Gordhanpur, constitute the portions of the parganah subject to annual summary settlements. The assessment of 1861 resulted in a reduction of Rs. 2,306, and Mr. Cadell writes that there is no hope of increase to the land-revenue in this parganah, and the "chief object to be looked to in a summary revision of the assessment is to secure those estates which have deteriorated since the date of Mr. Keene's settlement from being injured by assessments which, owing to increasing swamp, may have become too heavy." Much has, however, been done to remedy these evils. Drainage works inaugurated by Captain Forbes have already produced marked and valuable results within a limited area, and a good cart-road will soon be constructed from Púr to Gordhanpur, crossing the swamp by an earthen embankment and the Soláni by pontoons. Still cultivation has decreased, in ten years, in the swamped estates from 4,876 acres to 3,488 acres, and in the 35 upland estates bording on the *khádir* from 10,234 acres to 9,744 acres.

Population.

According to the census of 1872, parganah Gordhanpur contained 56 inhabited villages, of which 32 had less than 200 inhabitants; 16 had between 200 and 500, and 8 had between 500 and 1,000. The settlement record shows 75 estates on the register in 1863. The total population in 1872 numbered 13,394 souls (6,007 females), giving 181 to the square mile. Classified according to religion, there were 11,845 Hindús, of whom 5,321 were females and 1,549 Musalmáns, amongst whom 686 were females. Distributing the Hindu population amongst the four great classes, the census shows 857 Brahmans, of whom 373 were females; 235 Rajpúts, including 111 females; 524 Baniyas (237 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 10,229 souls, of whom 4,600 are females. The principal Brahman subdivision found in this parganah is the Gaur (847). Rajpúts belong for the most part to the Gaur clan (304) and Baniyas to the Agarwál (522) subdivision.

Amongst the other castes, the chief in numbers are the Kahár, Chamár (2,908), Kumhár (243), Máli (447), Khákrob (336), Gújar (3,677), and Saini (792). Amongst the Musalmáns, Shaikhs number 1,431 souls.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age) 92 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 604 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 180 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 2,076 in agricultural operations; 652 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral and animal. There were 676 persons returned as labourers, and 38 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 209 as landholders, 5,789 as cultivators, and 7,396 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 98 males as able to read and write out of a total male population numbering 7,387 souls. Gordhanpur or Gobardhanpur represents a portion of the old parganah of Tughlakpur called after the village of Tughlakpur, near which in 1398 A.D. Timúr had a naval fight. The parganah was subsequently named from the village of Núrnagar, so called after the famous Núrjahán, who lived there for a short time. Núrnagar is now in parganah Púr near the entrance of the Ganges canal into this district, and Tughlakpur is on the right bank of the Soláni in the same parganah. In 1841 three villages were received from Manglaur, twelve from Rúrki, and one from Thána Bhawan, aggregating a revenue of Rs. 6,841, while five villages were transferred from Núrnagar to Manglaur, nine to Rúrki, and three to Jawálapur, aggregating a revenue of Rs. 7,813. Six villages were received from Bhukarheri in 1863.

GORDHANPUR, a village in the parganah of the same name in the north-eastern corner of the Muzaffarnagar district, is distant 26 miles from the civil station. The population in 1872 numbered 839 souls. There is a first-class police-station and a branch post-office here. This village gives its name to the parganah.

GÚLA, a village in parganah Shikárpur of the Muzaffarnanar district, is distant 13 miles from the civil station. This village in 1865 had over 3,000 inhabitants; in 1872 the numbers were 2,316, chiefly Játs. The site lies to the west of the Káli nadi on broken somewhat raised ground leading down by ravines to the river-bed, which is here a mile wide. The lanes are open and wide and drain well towards the river. The water is good and is found at a depth of thirty feet from the surface. Though far removed from canal irrigation, fever has been prevalent here in an epidemic form.

HARHAR, a village in parganah Thána Bhawan of the Muzaffarnagar district, is distant 23 miles from the civil station. The population in 1872 numbered 948 souls, chiefly Rángar Musalmáns. The site is somewhat raised and lies on the high land leading down to the *khádir* or low-land of the west or right bank of the Krishni nadi, with a good fall for the drainage. The well-water is good and is found at a depth of twenty-eight feet from the surface. The proprietors lost their rights on account of rebellion in 1857, and the village now belongs to a Baniya of Muzaffarnagar. The old fort of the former owners is now in ruins and overgrown with jungle, but still presents a respectable appearance. The present state of the village is what might be expected from its being the property of an absentee Baniya landholder. The ways are narrow and broken, and manure heaps and refuse lie amid stagnant pools in every direction, whilst every thing shows neglect and an entire absence of any regard for cleanliness. During the mutiny, the inhabitants of Harhar and the neighbouring villages of Heradh and Sikka were punished for their turbulence. Those of Harhar waged war against all comers, and from robbing and murdering every traveller that passed along, effectually closed the road. The flying column found here upwards of forty cart-loads of plundered property, consisting of sugar, gums, dyes, &c., belonging to merchants at Shámli.

HASANPUR, a village in parganah Bhúma of the Muzaffarnagar district, is distant 28 miles from the civil station. The population in 1872 numbered 1,375 souls. The village site lies on the edge of the *bángar* or upland overlooking the Ganges *khádir*, and contains six muhallas or wards. The houses are scattered and built of mud. The water in the wells is found at forty feet from the surface. Hasanpur formerly belonged to a Sayyid family, but has now fallen into the hands of a Baniya money-lender. Traces of the Sayyid ownership are apparent in the remains of brick-built houses, the old *masjid*, now out of repair, and the wide road-ways.

HUSAINPUR, a village sometimes known as Husainpur-Bahádurpur in parganah Bhúma of the Muzaffarnagar district, is distant 22 miles from the civil station. The population in 1872 numbered 1,835 souls, chiefly Chauhán Rajpút zamíndárs and cultivators and Chamár labourers and sub-tenants. The village is really made up of two villages, Husainpur and Bahádurpur, but these are so closely joined together that they are for all practical purposes known as one. The site lies about the centre of the Ganges *khádir* or river-bed and is very uneven, filthy and uncared for. Cultivation in the neighbourhood is much impeded by the existence of high grown grass which harbours large numbers of wild pigs and occasionally tigers from the opposite side of the river. Water, in the only brick-built well, is found at nine feet from the surface and in the rains rises up to nearly the surface. In the hot-weather the grass is often burned down, and with it the village huts, a fact which may account for the

poor appearance of the village. In the mutiny, Husainpur was plundered by the Gújars of Siáli, who carried off all the cattle and movable property they could lay hands on, and since then the inhabitants have not been able to recover entirely their former position. Husainpur is a halting-place on the Meerut and Bijnaur road, 7½ miles from Bahsúma and 84¼ miles from Bijnaur. The villagers suffer from coughs and chest diseases, due to the exposed position of the site and from fever in the autumn.

ILAHABÁS, a small village in parganah Bhukarheri of the Muzaffarnagar district, is distant 19 miles from the civil station. The population in 1872 numbered only 385 souls, and it is only noticed as containing an out-post of police.

JALÁLABAD, a town in parganah Thána Bhawan of the Muzaffarnagar district, is distant 21 miles from Muzaffarnagar. Jalálabad in 1847 had a population of 7,789 souls; in 1853 the numbers were 8,600 and in 1865 were 7,859. There were only 6,904 inhabitants in 1872, of whom 3,249 were Hindús (1,465 females) and 3,655 were Musalmáns (1,833 females), chiefly Patháns. The Chaukidári Act is in force, and in 1872 supported a village police numbering 26 men of all ranks at an annual cost of Rs. 1,512, besides a staff of sweepers. There is a police-station here supported from the chaukidári funds, and a branch post-office. The total income from all sources in 1872-73 was Rs. 3,488, giving an incidence of Re. 0-6-0 per head of the population and Rs. 2-2-0 per house assessed. During the same year the number of houses assessed was 1,303 and the expenditure was Rs. 2,252.

The township comprises 2,714 acres, of which 69 acres are occupied by the site alone. Rice and wheat are the principal crops; the former is grown in the *khádir* of the Krishni, which flows close to the town on the east, and along a canal channel of the eastern Jumna canal which runs on the west. To the north-west, at a distance of about half a mile, is a large jhíl or swamp which dries up in the hot-weather, the surface drainage flowing off to the east. Good drinking water is afforded by masonry wells, and is found at a depth of twenty-five feet from the surface. Fever has made sad havoc amongst the inhabitants and has no doubt contributed to the gradual decay of the town. Sanitation is entirely neglected, and water-holes exposing banks of black, stinking mud are common. Jalálabad lies on the route from Dehli to Saháranpur and is distant 13½ miles from Shámli and 13⅛ miles from Rámpur. From Shámli the road is earthen, raised and bridged, and passes through Banat, Sikka, Heradh (6 miles), Harhar and Thána Bhawan (11 miles)—all bad villages during the mutiny. From Thána Bhawan to Rámpur the road is sandy in places and heavy; it passes Kamálpur at four miles nd Khudána at eight miles. Water and supplies are procurable at Jalálabad, and there is a market on Sundays and Thursdays, only inferior to

The site.

the great mart of Shámli. The folly of its Pathán owners in grasping at exorbitant dues has lessened the trade, but has not yet succeeded in driving it away. Jalálabad is said to have received its name from one Jalál Khán, Pathán, in the reign of the Emperor Alamgír.

Ghausgarh.

The celebrated fort of Ghausgarh was built by Najíb Khán, Rohilla, within a short distance of Jalálabad, and the Pathán of the town formed no unimportant protion of his levies. During the rule of Zábita Khán the town was more than once sacked by the Marhattas, and a Marhatta is still in possession of Mánikpur close by as a revenue-free grant. On the death of Ghulám Kádir the site of Ghausgarh was deserted, and though one of Perron's deputies endeavoured to restore the old fort, he was too late, for Lord Lake had already reached Dehli. Afterwards Sikh horsemen harried the country, and nothing remains of the old site beyond old mud walls, a few scattered bricks, and the ruins of a mosque. To complete its ruin, the Government has lately conferred the proprietary right to the enclosure within the walls on a colony of Rorhs. The Pathán of Jalálabad remained quiet during the mutiny, and one of their principal leaders did good service as tahsíldár of Thána Bhawan after its capture.

JÁNSATH, a town in parganah Jauli Jánsath of the Muzaffarnagar district, is distant 14 miles from Muzaffarnagar. The population in 1874 was 5,312, in 1853 was 5,589, and in 1865 was 6,121. In 1872 there were 6,117 inhabitants, of whom 3,478 were Hindús (1,613 females) and 2,639 were Musalmáns (1,259 females). The Chaukidári Act is in force, and in 1873 supported a village police numbering 21 men at an annual cost of Rs. 1,224, besides a staff of scavengers. The total income from all sources in 1872-73 was Rs. 19-1-2, giving an incidence of Re. 0-4-9 per head of the population and Re. 1-8-5 per house. During the same year the number of houses assessed was 1,203, and the expenditure was Rs. 2,145.

The site.

The site is low with sandy soil, here and there mixed with clay. *Urd* is the principal rain-crop and wheat in the spring. Rice has been cultivated of late years and is watered from the canal channels which run on each side of the site. The one to the south-east seems to obstruct the drainage and causes considerable flooding in the rains. The water in the wells is fifteen feet from the surface, with double that depth of water. To the south-east lies Muhalla Gadhi, or Jánsath Gadhi as it is often called, a separate village surrounded by a high brick wall. Within the drainage is very imperfect and much water lodges in the rains; outside there are filth holes and stagnant ponds of every description. Fever and, in 1867, cholera have been very prevalent here. The cutting from the Jánsath water-holes and the ditch around Gadhi both unite and are continued by Tisang to the Nágan nadi. They serve to carry off a portion of the superfluous rainfall

which formerly stagnated in the hollows around both sites. There is a second-class police-station, a branch post-office and a school here. The Sayyids of Jánsath are descendants of Sayyids Umar Shahíd, Tihanpuri, for an account of whom see the district notice under "History." The original inhabitants were Játs and Brahmans.

JÁNSATH, a parganah of the tahsíl of the same name of the Muzaffarnagar district, is bounded on the north by parganahs Muzaffarnagar and Bhukarheri; on the west and south by parganah Khátauli, and on the east by parganah Bhúma Sambalhera. According to the census of 1872, this parganah had then a total area of 96 square miles and 531 acres, of which 75 square miles and 224 acres were under cultivation. The area assessed to Government revenue during the same year was 92 square miles and 312 acres, of which 71 square miles and 243 acres were cultivated, 14 square miles and 448 acres were culturable, and 7 square miles and 256 acres were barren.

Physical features.

The distiguishing features of the parganah are sand and swamp. The Ganges canal runs through the north-western portion of Jánsath with a south-easterly course. All along the northern boundary of the parganah, there is a general tendency to sand, but the greatest extent of poor land is contained in the sandy belts which enter from the north-west and run through this parganah into the adjoining one of Bhúma Sambalhera. This belt, ordinarily two to three miles in breadth, is one of the poorest tracts in the district, and although traversed by canal distributaries is, except in years of famine prices, entirely unirrigated. In addition to this belt, the parganah is traversed from north to south by three lines of sand-hills; a very clearly marked but not very extensive ridge runs through the north-west corner, and this running through the middle of the parganah branches off into three lines which affect more or less the quality of almost every estate in the extreme south of the parganah. On the eastern boundary, a ridge of less importance passes through several estates in Jánsath into the adjoining parganah of Bhúma Sambalhera. The only stream in the parganah is the east Káli, locally known as the Nágan nadi, which just acquires a defined channel when it leaves the Antwára jhíl. The Nágan is at present a sluggish stream, blocked up at the southern boundary of the district by a bar of stiff clay soil through which the water has not been able to force a sufficient channel. Owing to percolation from the canal and the waste water of the Jánsath rajbaha, and latterly to the construction of the Jánsath drainage line, which brings the surface drainage of a considerable additional tract into this channel, the valley of this river has been seriously injured, and what were once fertile fields along its banks are now becoming more and more water-logged. A project for the improvement of the drainage of this line was formed in 1871, and has since been partially carried out.

Fiscal history.

The revision of the settlement under Regulation IX. of 1833 was made by Mr. Grant in 1863, and the revision of Mr. Grant's assessment was made by Mr. A. Cadell in 1872-73. The following statement gives the statistics of area, &c.:—

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
1841, ...	61,922	5,941	1,157	11,084	6,273	37,467	43,740	56,152	1 4 6
1863, ...	61,971	6 239	1,132	5,837	18,564	30,199	48,763	58,578	1 3 3
1871, ...	61,935	5,965	1,131	4,547	24,513	25,779	50,292	59,378	1 3 6
1875, ...	61,963	5,934	1,135	4,575	24,245	26,074	50,319	81,110	1 9 9

The last line gives the corrected returns made by Mr. Cadell in 1875. The parganah was divided into three circles for the purposes of assessment in 1871. All the nine estates placed in the first class are situated in the central portion of the parganah to the south of the sandy plain and to the north of the tract in which the land begins to slope perceptibly towards the east Káli nadi. These estates are all well irrigated and are chiefly cultivated by Játs and Sainis. The forty estates comprising the second-class are situated in all parts of the parganah except the extreme south-west, which is occupied entirely by the third-class. In this last class, comprising 15 estates, four adjoin the sand plain on the north, and the remainder are in the south-west corner, where a sandy upland, swamped fields along the river and a less industrious population make the estates less productive. The soil areas of the parganah in 1872 are given at page 351. Of the crops grown in these soils, the *kharíf* or rain-crops cover 55 per cent. of the total area, and amongst them sugar-cane occupies 6·3 per cent. of the total area; cotton, 3; *munji* or fine rice, 2·7; common rice, 2·7; fodder crops, 7·7; *urd*, 11·2; and *bájra*, 11·3 In the *rabi* wheat occupies 26·5 per cent. of the total cultivated area, or if *dofasli* cultivation be included, 27 per cent., gram, 5·5; barley, 6·2; wheat and gram, 1; and *gojai* or mixed barley and wheat, 3 per cent.: so that in the *rabi*, the best crops occupy 42·2 per cent., out of a total *rabi* cultivation of 44 per cent. on the total area. The increase in cultivation during the last thirty years is very small, for as both the assessment in 1841 and that in 1863 were made immediately after seasons of drought, much land cultivated in ordinary seasons must have been entered as fallow. Irrigation, though general thirty years ago, has trebled since then, and the canal has to such an extent superseded wells that whereas in the central tract lying between the sandy plain on the north and the poorer estates to the south 3,433 acres were watered in 1840-41; only

one-third of this area is now watered from wells and tanks, whilst the total irrigation has risen to 12,265 acres. Here, as elsewhere, the substitution of canal for well water has released both men and cattle for other work, so that the competition for land has raised the rents of this tract higher than in estates of perhaps equal fertility and with equal facilities for irrigation to the north-east. Though the population has not increased, the canal water has had results similar to those which would have been caused by a substantial increase both to the numbers and wealth of the population. To the south of the parganah, *kuchcha* wells can be constructed where the canal distributaries do not run. Altogether perhaps there is no parganah in the district in which the area watered from canals advances so rapidly in seasons of drought and falls so much when the necessity for artificial irrigation ceases.

Owing to the destruction of records, materials do not exist for tracing the history of the settlements previous to that made by Mr. Thornton in 1840-41; his assessment was very moderate and his estimate of the rental low, especially when it is considered that Jánsath was to some extent less absolutely dependent on irrigation than its neighbours. Mr. Grant's assessment made but little enhancement, and during the currency of both these revisions it was not found necessary to have recourse to coercive processes for the recovery of the land-revenue. The rent-rates assumed by Mr. Cadell in 1871 were as follows:—

	Irrigated.									*Dry.*								
	Bárah.			Loam.			Sandy loam.			Loam.			Sandy loam.			Sand.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
1st circle, ...	12	0	0	6	12	0	4	8	0	3	6	0	2	4	0	1	8	0
2nd „	9	0	0	5	10	0	3	12	0	3	0	0	1	11	0	1	2	0
3rd „	9	0	0	4	8	0	3	6	0	2	10	0	1	8	6	0	15	0

The application of these rates to the soil areas gave an assumed rental of Rs. 1,81,698, or Rs. 96,060 in excess of the rental of 1841, and Rs. 72,439 above that of 1863, and after allowing ten per cent. for sparsely populated and ill-cultivated estates an assumed rental of Rs. 1,64,696 gives an increase of Rs. 79,058 over that of 1841, of which sum, Mr. Cadell credits Rs. 10,000 to increased cultivation and the remainder to increased irrigation. The revenue indicated by the applied rent-rates shows an increase of Rs. 24,018 over the revenue of 1841, and of Rs. 22,532 over the revenue of 1863. The revenue, in 1841, amounted to Rs. 57,092; this was raised, in 1863, to Rs. 58,578, and this, after remissions and additions, stood at Rs. 59,378 in 1871. The actual assessment made amounted to Rs. 81,110 and came into force from 1872-73.

Population.

According to the census of 1872 parganah Jauli Jánsath contained 55 inhabited sites, of which 8 had less than 200 inhabitants; 20 had between 200 and 500; 21 had between 500 and 1,000; three had between 1,000 and 2,000; and two had between 2,000 and 3,000. One town, Jánsath itself, had over 5,000 inhabitants. The settlement records show that there were then 63 estates on the register. The total population in 1872 numbered 37,097 souls (17,012 females), giving 382 to the square mile. Classified according to religion, there were 24,637 Hindús, of whom 11,191 were females, and 12,460 Musalmáns, amongst whom 5,851 were females. Distributing the Hindu population amongst the four great classes, the census shows 1,033 Brahmans, of whom 462 were females; 209 Rajpúts, including 90 females; 1,759 Baniyas (823 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 21,636 souls, of whom 9,816 are females. The principal Brahman subdivision found in this parganah is the Gaur, numbering 1,032 souls in 1872. Baniyas belong for the most part to the great Agarwál (897) and Saraugi (754) subdivisions. Amongst the other castes the principal are the Taga (136), Budhi, Kahár, Chamár (6,707), Garariya, Kumhár (859), Hajjám, Sonár, Jogi, Kalál, Khákrob (1,130), Ját (2,363), Banjára, Gújar (2,030), and Saini (3,138). The Musalmáns are distributed amongst Shaikhs (9,864) and Sayyids (2,182). The extreme north-west portion of the parganah, Jauli and the adjacent villages, is still held by a colony of Gardezi Sayyids who appear to have settled here long before the Sayyids of the Bárha. These last settled about eight generations before the reign of Akbar in the now pretty village of Dhasri, from which the four tribes, Kundliwál, Tihanpuri, Chhatrauri and Jagneri, are said to have gone forth. The Tihanpuri branch alone remained in Dhasri and the adjoining village of Kamhera until they took possession of Jánsath, and although in subsequent alterations of the parganah boundaries, the single Jagneri village in the Bárha, one Kundliwál and several Chhatrauri villages came to be included in Jauli-Jánsath, this parganah was always and is still, with the exception of the north-west corner, essentially a Tihanpuri one, and during the reigns of Sháhjahán and Alamgír it gave governors and ministers to the Empire, whose occupation is still shown by the presence of well-built mosques, fallen tombs and ruined towns.[1] Notwithstanding the losses brought upon them by the victorious faction during the reign of Muhammad Sháh and the subsequent troubles during which the Patháns ruled the district, the Sayyids, at the conquest in 1803, still retained a considerable portion of the parganah, and the transfers that have since taken place have chiefly been amongst themselves. The chief exceptions to this rule are the Khátauli estates transferred to this parganah and purchased

[1] From a note by Mr. A. Cadell.

by the Marhal Nawáb of Karnál. Although, during the last thirty years, one-third of the parganah has changed hands, Sayyids still remain owners of nearly three-fourths. The Tálra money-lenders, once servants of the Jánsath Sayyids, and through them the money-lenders of Jánsath itself, are the principal landholders next to the Sayyids. Játs have held their own in one and acquired five villages since 1841, and the Shaikhs of Kheri Kuraishi still retain portions of three villages. Here, as elsewhere throughout the district, transfers, for the most part, have been due to causes entirely independent of the incidence of the Government demand, and have been most important in estates owned by families which once held a high position. During the last nine years the average rate obtained at both private sales and mortgages for land in this parganah has increased from Rs. 7-0-6 (1841 to 1861) to Rs. 17-5-6 (1862 to 1870) per acre, and from Rs. 7-1-6 to Rs. 15-3-9 per rupee of the land-revenue, which would show that the value of land has almost doubled.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 167 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,636 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 700 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 5,534 in agricultural operations; 1,515 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,506 persons returned as labourers and 225 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 504 as landholders, 14,947 as cultivators, and 21,646 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 938 males as able to read and write out of a total male population numbering 20,055 souls.

This parganah represents portions of the old Akbari parganah of Jauli, which, in 1816, had 19 villages. Jánsath was formed from Jauli during the reign of Farrukhsiyar. At the rectification of boundaries in 1854-55 it was thus re-constituted: Jauli Jánsath, 33 estates; Bhúma, 4; Sambalhera, 2; Muzaffarnagar, 3; Bhukarheri, 7; Púr, 3; Khátauli, 4; Hastinápur, 6; and from parganah Saháranpur in the Saháranpur district one estate assessed at Rs. 200. The bulk of the parganah still belongs to three of the principal remaining families of the Bárha Sayyids whose history has been traced in the district notice.

JAULA, a village in parganah Budháṇa of the Muzaffarnagar district, is distant 22 miles from the civil-station, 13½ miles from Bhawáni in the Meerut

district, and 14½ miles from Shámli. The population in 1872 numbered 3,496 souls, three-fourths of whom were Rángar Musalmáns. There is an encamping-ground here with plenty of water, and supplies are procurable from Budhána and the neighbouring villages. From Bhawáni the country is open, level and well cultivated, and the road is very tolerable. The road passes Golka at three miles; the Hindan by a ferry at 5½ miles; Nagwa at 6½ miles; Kurthal at 8½ miles, and Bilanda at 10 miles. Hence to Shámli the road and country are of the same character, but more subject to inundation during the rains. The road passes through the lands of Sarái, Lúi, Phugána, Khera Mastán and Hasanpur; it crosses the Krishni by a bridge at Jhál (9½ miles) and passes through Tájpur and Gágharpur to Shámli. The houses in Jaula are built of mud with the exception of the *garhi* or 'fort,' the residence of the proprietor's agent. The land on three sides consists of the light friable soil known as *rausli*, and on the fourth side is sandy *(bhúr)*. The site is raised, but much broken by excavations full of stagnant water in the hot-weather, and is badly kept, especially in the Chamárs' quarters. The well water is found at a depth of 35 feet from the surface. The Musalmán residents are a turbulent race, and in the mutiny joined the rebel cause, for which those who were landowners forfeited their proprietary rights. They joined Khairáti Khán of Parasauli in rebellion and for some time defied all the troops sent against them. At length on the 14th of September they attacked, in force, a party proceeding to Budhána, but were at once driven back with great loss, and the village was entered at the point of the bayonet. The main body of the rebels escaped amongst the high crops, but left about two hundred dead on the field. The proprietary right in the village has been conferred upon Sayyid Imdád Husain of Tisang for services rendered in 1857.

The site.

JAULI, an important village in parganah Jauli-Jánsath of the Muzaffarnagar district, is distant 9 miles from the civil station. The population in 1865 numbered 3,000 souls, of whom the greater portion were Musalmáns; in 1872 there were 2,107 inhabitants. The Panhara distributary of the Ganges canal runs close to the village site. The water in the wells, now 16 feet from the surface, used to be at a depth of 30 feet. On the whole the site is badly drained, and numerous excavations contain pools of stagnant water which must in a great measure have given rise to the malarious fevers from which the people have suffered so much. High crops, want of cleanliness and bad drainage, here as in many other of the large villages in this district, must be charged with the unusual sickness which has been so rife of late years. The village is squalid and filthy in appearance, consisting of mud huts, separated by narrow, irregular, tortuous lanes which are unmetalled and undrained. The Ganges canal runs close to the town on the west, the Anúpshahr branch is on the south, and canal channels pass it on the east and north. There is a branch post-office here.

JHANJHÁNA, a town in parganah Jhanjhána of the Muzaffarnagar district, is distant 30 miles from Muzaffarnagar. In 1847 the population was 5,662, in 1853 there were 5,531 inhabitants, and in 1865 there were 5,334. The population in 1872 numbered 5,116 souls, of whom 2,929 were Hindús (1,392 females) and 2,187 were Musalmáns (1,056 females). The Chaukidári Act (XX. of 1856) is in force in Jhanjhána, and in 1872 supported a village police numbering 17 men of all ranks at an annual cost of Rs. 984, besides a few sweepers. There is a second-class police-station and a post-office here. The total income from all sources in 1872-73 was Rs 1,977, giving an incidence of Re. 0-4-8 per head of the population and Re. 1-5-3 per house. During the same year the number of houses assessed was 1,135 and the expenditure was Rs. 1,953. The site of the town was formerly a brick fort covering about 29·3 acres. The surface soil is heavy, retentive and clayey, and yields fair crops of rice and sugar-cane in the rains and in the spring gives wheat and gram. To the north-west flows the Kátha nadi at a distance of about a quarter of a mile and forms the drainage line; on the east is a canal channel, and near it a drainage cut from Bhainswál. Good drinking water is procurable from masonry wells, in which the water is at a good depth from the surface in the higher parts of the town, but rises to ten feet in the low ground and approaches close to the surface in the rains. Water-holes open and full of impurities exist all round, and in the rains from Jhanjhána to Shámli in one direction and to the Jumna on the west in the other, the whole country is often under water. The entire town is very filthy, and fever, small-pox and cholera are all common diseases.

The site.

JHANJHÁNA, a parganah of the Shámli tahsíl of the Muzaffarnagar district, is bounded on the north by the Saháranpur district; on the west by parganah Thána Bhawan; on the east by parganah Bidauli; and on the south by parganahs Kairána and Shámli. According to the census of 1872, this parganah had then a total area of 93 square miles and 595 acres, of which 51 square miles and 557 acres were under cultivation. The area assessed to Government revenue during the same year was 82 square miles and 448 acres, of which 44 square miles and 512 acres were cultivated, 24 square miles and 218 acres were culturable, and 13 square miles and 358 acres were barren.

Jhanjhána lies to the north-west of the district and is intersected by the Kátha nadi, which takes a course south-west through the parganah and enters the Jumna in parganah Kairána. To the north is a cluster of small villages rather high, with a light sandy soil and water at a great depth. Towards the south, the soil improves, and in the south-east resembles in fertility the neighbouring parganah of Shámli. To the west of the Kátha the villages resemble those of the Bidauli parganah in every respect. To the north-west, cultivation is backward and the face of the country is

Physical features.

shrouded with high *dhák* jungle, the retreat of predatory Gújars; the soil, however, is naturally good and up to the average of the district. To the south-west the soil is barren and there are few inhabited villages. Roads connect Jhanjhána with Bidauli, Shámli, and Thána Bhawan. Gújars are the prevailing caste to the west of the Kátha and Játs to the east, with a fair sprinkling of Rorhs, Shaikhs, and Patháns. The villages are for the most part held in *bháyachára* tenure; there are only three *zamíndári* villages, and these lie in the Gújar tract about Alauddínpur. Jhanjhána suffered much from drought in 1860-61 and its attendant, cholera. The former settlement was made by Mr. E. Thornton and the revision was effected in 1862 by Mr. A. Colvin.[1] The old assessment worked well as a whole, though the trans-Kátha villages seem to have been somewhat over-assessed and required relief at the revision. The eastern Jumna canal sends several distributaries into the eastern portion of the parganah. In 1841, the irrigated area was 1,151 acres in 9 villages, in 1862 it rose to 3,653 acres in 16 villages, and in 1872-73 the area irrigated amounted to 5,249 acres.

Fiscal history.

The transfers during the currency of the old settlement (1841-61) amounted to 9,078 acres, or about one-fifth of the total area, and the selling price in forced sales averaged from three to four years' purchase of the land-revenue and in private sales about five times the land-revenue. Money-lenders purchased about one-fourth of the land sold. Mahájans alone bought in 2,624 acres. Játs lost 3,102 acres, Afgháns 1,445, and Gújars 1,909 acres. Játs, Gújars, Rajpúts, Mahájans, Patháns, Shaikhzádahs, and Bilúches are still the principal castes amongst the proprietary body.

Transfers.

The following statement shows the statistics of the land-revenue at the past and present settlements:—

Land-revenue.

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
1848, ...	59,782	5,186	7,592	17,429	...	...	29,575	63,056	2 2 1
1862, ...	57,436	9,040	4,899	18,986	19,308	5,703	25,011	55,698	2 4 3

The land-revenue for 1872, according to the census returns, amounted to Rs. 58,638 (or with cesses, Rs. 69,440), falling at a rate of Re. 0-15-7 per British

[1] Mr. Cadell recommended only five estates in this parganah for permanent settlement.

acre on the total area, at Re. 1-1-9 per acre on the area assessed to Government revenue, and at Re. 1-12-3 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 1,24,724.

Population.

According to the census of 1872, parganah Jhanjhána contained 53 inhabited sites, of which 16 had less than 200 inhabitants; 17 had between 200 and 500; 11 had between 500 and 1,000; 6 had between 1,000 and 2,000; one had between 2,000 and 3,000; and one had between 3,000 and 5,000. The only town containing more than 5,000 inhabitants is Jhanjhána itself with 5,116. The settlement records show that there were 65 estates on the register in 1863. The total population in 1872 numbered 36,090 souls (16,493 females), giving 384 to the square mile. Classified according to religion, there were 28,550 Hindús, of whom 12,899 were females, and 7,540 Musalmáns, amongst whom 3,599 were females. Distributing the Hindu population amongst the four great classes, the census shows 2,657 Brahmans, of whom 1,208 were females; 1,025 Rajpúts, including 436 females; 2,141 Baniyas (969 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 22,727 souls, of whom 10,286 are females. The principal Brahman subdivision found in this parganah is the Gaur, which gave 2,522 members in 1872. The Rajpúts belong principally to the Gaur (869) and Baranwár clans, and the Baniyas to the great Agarwál (2,107) subdivision. The most numerous amongst the other castes are the Budhi, Kahár, Chamár (3,510), Garariya, Juláha, Lohár, Kumhár, Hajjám, Sonár, Jogi, Kalál, Chhípi, Máli, Khákrob (1,601), Ját (4,678), Banjára (404), Gújar (684), and Rorh (501). The Musalmáns are distributed amongst Shaikhs (6,524) and Sayyids (401).

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 263 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,395 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c; 1,063 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 4,510 in agricultural operations; 2,044 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,629 persons returned as labourers and 488 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 629 as landholders; 11,244 as cultivators; and 24,217 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 941 males as able to read and write out of a total male population numbering 19,592 souls. Jhanjhána

represents portions of the old Akbari parganah of that name. Numerous changes have taken place in its constitution. In 1840-41 two villages were received from parganah Nánauta, one each from Rámpur and Nakúr, two from Gangoh, five from Thána Bhawan, and nine from Chaunsat Kheri, all assessed at Rs. 10,944.

Population.

KAIRÁNA, a town in parganah Kairána of the Muzaffarnagar district, is distant 31 miles from Muzaffarnagar. The population of Kairána numbered 11,470 in 1847. In 1853 the numbers were 15,162, and in 1865 they were 16,953. In 1872 there were 17,742 inhabitants; of whom 7,817 were Hindús (3,767 females) and 9,925 were Musalmáns (4,858 females). Distributing the population amongst the rural and urban classes proper, the returns show 1,140 landholders, 1,899 cultivators, and 14,703 following occupations unconnected with agriculture. The number of enclosures in 1872 was 2,036, of which 855 were inhabited by Hindús and 1,181 by Musalmáns. The number of houses during the same year was 4,258, of which 2,367 were built by skilled labour, and of these 1,024 were inhabited by Hindús and 1,343 by Musalmáns. Of the 1,891 mud huts in the town, 865 were occupied by Hindús and 1,026 by Musalmáns. Taking the male adult population (not less than fifteen years of age), we find more than fifty of them engaged in the following occupations:—Barbers, 77; beggars, 156; blacksmiths, 50; bullock-dealers, 56; cultivators, 695; dyers, 52; labourers, 1,324; landowners, 368; merchants, 92; oil-makers, 87; porters, 70; purohits, 94; servants, 341; shop-keepers, 890; shoe-makers, 284; sweepers, 113; toy-makers, 66; washermen, 64; and weavers, 512. All other trades found in a good commercial town exist here. The same returns show only 908 males out of the whole population as able to read and write.

Site.

The site is partly on the *khádir* or lowland of the Jumna and partly on the bank separating the *khádir* from the *bángar* or upland. A great number of the houses are built of bricks and are much crowded together. The streets also are very narrow and tortuous. The bazar is well paved and clean, but the remainder of the town is very filthy and sanitation is much neglected. The butchers' quarter is especially dirty and uncared for. The water is found in the wells at from ten to fifteen feet from the surface, and in the bazar at 25 feet, with a depth of eight feet. Though there is no canal irrigation in the neighbourhood, there is much irrigation from wells by means of the Persian wheel in the low-lying lands to the west of the town.

Municipality.

Kairána possessed a municipality during 1874-75, the affairs of which are managed by a committee of twelve members, of whom four are official and the remainder are elected by the tax-payers. The octroi during the year fell at Rs. 0-7-5 per head of the

population. The following statements show the imports, consumption per head, and the receipts and expenditure for the year 1874-75 :—

Statement showing imports in 1874-75.

Articles.	Imports in 1874-75.		Consumption per head in 1874-75.	
	Quantity	Value.	Quantity.	Value.
	Mds.	Rs.	Mds s. c.	Rs.
Grain, ...	122,061	...	6 36 7	...
Sugar, ...	11,659	...	0 26 5	...
Ghi, ...	959	...	0 2 2	...
Other articles of food, ...	12,141	6,202	besides head-loads.	
Animals for slaughter, ...	2,833 No.	...	...	...
Oil and oil-seeds, ...	7,164	...	0 16 1	...
Fuel, &c., ...	100	4,988	0 0 3	0 4 6
Building materials, ...	...	9,786	...	0 8 9
Drugs and spices, ...	...	14,867		0 13 9
Tobacco, ...	8,228	...	0 18 8	...
European and native cloth, ...	...	52,790	...	2 14 0
Native shoes, ...	...	1,761	...	0 1 7
Metals, ...	404	...	0 0 15	...

Statement showing receipts and expenditure in 1874-75.

Receipts.	1874-75	Expenditure.	1874-75.
	Rs.		Rs.
Opening balance, ...	3,886	Collections, ...	1,463
Class I.—Food and drink, ...	5,626	Head-office, ...	108
„ II.—Animals for slaughter,	268	Supervision, ...	110
„ III.—Fuel, &c., ...	628	Original works, ...	4[illegible]1
„ IV.—Building materials, ...	163	Repairs, ...	3,604
„ V.—Drugs and spices, ...	299	Police, ...	2,518
„ VI.—Tobacco, ...	279	Education, ...	418
„ VII.—Textile fabrics, ..	829	Charitable grants, ...	92
„ VIII.—Metals, ...	118	Conservancy, ...	1,109
Total Octroi, ...	8,210	Miscellaneous, ...	145
Rents, ...	53		
Fines, ...	108		
Pounds, ...	168		
Extraordinary, ...	369		
Total, ...	12,794	Total, ...	9,998

At the accession of Sháhjahán, Kairána and the surrounding country was given in *jágír* to Doctor Mukarrab Khán,[1] who built many edifices and laid out a beautiful garden with a large tank. He obtained excellent fruit trees from all parts of India, and the Kairána mangoes were, according to the *Maásir*, long famous in Dehli.

1626 A.D.

[1] See district notice under "History."

Mukarrab Khán constructed a *dargáh* near the tomb of the famous saint Bú Ali Kalandar of Pánipat, and died at the age of ninety. He was succeeded by his son Rizk-ullah Khán, who died in 1668 A.D. The tomb itself of the saint was built[1] by Rizk-ullah in 1660 A.D. The local poet Sadullah, known as *Mastha-i-Kairánawi*, was the adopted son of Mukarrab Khán.

KAIRÁNA, a parganah of the Shámli tahsíl of the Muzaffarnagar district, is bounded on the north by parganahs Bidauli and Jhanjhána; on the west by the Jumna river; on the east by parganah Shámli; and on the south by parganah Kándhla. According to the census of 1872, this parganah had then a total area of 89 square miles and 589 acres, of which 53 square miles and 320 acres were under cultivation. The area assessed to Government revenue during the same year was 88 square miles and 505 acres, of which 52 square miles and 294 acres were cultivated, 26 square miles and 156 acres were culturable, and 10 square miles and 58 acres were barren.

Physical features.

Kairána lies to the south of Bidauli on the Jumna. It is intersected by the Kátha nadi, which after a course somewhat south-west through the northern portion of the parganah, joins the Jumna nearly opposite the town of Kairána. The group of villages to the north of the Kátha, bordering on Bidauli, are in every respect bad and resemble those to the north in their indifferent soil and careless cultivation. To the south of the Kátha the villages of the Kairána uplands though they have a poor soil, yet have abundant means of irrigation and a large population. The villages in the Jumna *khádir* are, however, the richest and the spring crops here are very fine. Kairána is connected by roads with the Panjáb, Shámli, Jhanjhána, and Kándhla. The Gújar is the prevailing caste both amongst the proprietors and agriculturists. The former assessment was very light, and to this may be attributed the comparative prosperity of the parganah. Mr. Colvin says the new assessment is less than what might be fairly demandable, for where the fair demand gave an excessive increase over the existing revenue he went "somewhat below it, believing that a sudden shock to the landlords and change in their means of subsistence would inevitably lead to distress and degrade them from the position of comfort and independence" in which he found them.[2]

Transfers.

Transfers in this parganah during the currency of the old settlement (1841-61) amounted to 6,230 acres, less than one-eighth the total area. The selling value in forced sales was about seven times the annual land-revenue, and in private sales it rose to eight times the revenue. Mahájans succeeded in obtaining possession of nearly one-half (2,819 acres) of the land transferred, the remainder chiefly falling into the

[1] Proc. As. Soc., Ben., May, 1873, p. 97.

[2] Mr. Cadell recommended the exclusion the whole tract from permanent settlement.

hands of men of the vendor's caste. Gújars lost 4,617 acres and Shaikhzádahs 685 acres, but the former recovered nearly one-half of their losses.

Land-revenue.

The following statement shows the statistics of the land-revenue at the past and present settlements :—

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
1848 ...	55,210	5,733	4,226	16,135	818	28,298	29,116	49,570	1 11 2
1862 ...	57,545	6,301	1,096	16,506	24,935	8,707	33,642	62,371	1 8 10

The land-revenue for 1872, according to the census returns, amounted to Rs. 53,606 (or with cesses, Rs. 62,101), falling at a rate of Re. 0-14-11 per British acre on the total area, at Re. 0-15-1 per acre on the area assessed to Government revenue, and at Re. 1-9-1 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 1,10,876.

Population.

According to the census of 1872, parganah Kairána contained 40 inhabited villages, of which 10 had less than 200 inhabitants; 16 had between 200 and 500; 7 had between 500 and 1,000; four had between 1,000 and 2,000; two had between 2,000 and 3,000, and one, Kairána itself, had 17,742. The settlement records show that there were 57 estates on the register in 1863. The total population in 1872 numbered 38,828 souls (18,045 females), giving 431 to the square mile. Classified according to religion, there were 20,535 Hindús, of whom 9,516 were females, and 18,293 Musalmáns, amongst whom 8,529 were females. Distributing the Hindu population amongst the four great classes, the census shows 1,922 Brahmans, of whom 881 were females; only one family of Rajpúts, 3,058 Baniyas (1,443 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 15,551 souls, of whom 7,189 are females. The principal Brahman sub-division found in this parganah is the Gaur, numbering 1,922 souls in 1872. The Baniyas all belong to the great Agarwál sub-division. Amongst the other castes which occur here, the most numerous are the Kahár, Chamár (2,838), Garariya, Juláha, Lohár, Kumhár, Sonár, Hajjám, Jogi, Khákrob (1,728), Ját (129), Gújar (3,105), and Saini (325). The Musalmáns comprise Shaikhs (17,320) and Sayyids (321).

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age),

197 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,298 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,420 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 5,323 in agricultural operations; 2,152 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,274 persons returned as labourers and 444 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 3,902 as landholders, 9,973 as cultivators, and 24,953 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,212 males as able to read and write out of a total male population numbering 20,783 souls. Kairána represents portions of the old Akbari parganah of the same name, but owing to interchanges with other parganahs, it would be difficult to restore it to its original size even at the commencement of the British rule. In 1816 it contained only 25 villages, assessed at Rs. 19,033. In 1840-41 it received two villages assessed at Rs. 400 from parganah Chaunsat Kheri in the Saháranpur district, and it also absorbed the old parganah of Títarwára, comprising eight villages.

KALIÁNA, an observatory of the Great Trigonometrical Survey, on the right bank of the Hindan, close to the Charthawal road in parganah Charthawal of the Muzaffarnagar district, lies in lat. 29°-30′-55″ and long. 77°-41′-33″, at an elevation of 827·5 feet above the level of the sea. The upper markstone of the survey station is fixed within the observatory erected for the purpose of taking celestial observations. The village of Kachauli is to the north-north-east, 0·8 mile; Kasári to the north-north-west, 1·8 miles, and Sayyid Nagla to the north-west, 0·7 mile. This height is deduced trigonometrically.

KÁNDHLA, a town in parganah Kándhla of the Muzaffarnagar district, is distant 33 miles from Muzaffarnagar. The population of Kándhla in 1847 numbered 7,062 souls, in 1853 the numbers were 10,130, and in 1865 they were 11,969. In 1872 there were 11,026 inhabitants, of whom 6,085 were Hindús (2,823 females) and 4,941 were Musalmáns (2,404 females). Distributing the population amongst the urban and rural classes proper, the returns show 844 landholders, 1,232 cultivators, and 8,950 persons following occupations unconnected with agriculture. The number of enclosures in 1872 was 744, of which 384 were occupied by Hindús and 360 by Musalmáns. The number of houses during the same year was 2,459, of which 1,095 were built by skilled labour, and of these 723 were inhabited by Hindús and 372 by Musalmáns. Of the 1,364 mud huts in the town 781 were occupied by Hindús. Taking the male adult population (not less than fifteen years of age), we find more than fifty of them engaged in the

Population.

following occupations:—Barbers, 83; beggars, 103; butchers, 64; cultivators, 523; labourers, 874; land-owners, 1,977; potters, 53; purohits, 71; servants, 277; shopkeepers, 583; sweepers, 101; water-carriers, 53; and weavers, 292. Besides these there are the common trades usually found in a semi-agricultural town. The same returns show that only 532 males out of the whole population can read and write. The Musalmán quarter lies to the west end of the town. The site lies to the west of the eastern Jumna canal, between which and the town the land is low, with shallow water lying in places. The larger streets are fairly kept, but in places there are numerous excavations and very many heaps of broken bricks and refuse which materially interfere with all proper sanitary arrangements. In the Musalmán quarter, the slaughter-houses are badly situated and require attention. The water in the wells is found at a depth of twelve feet from the surface. There is a second-class police-station and a post-office here, and for the last ten years a small trade in the manufacture of saltpetre has sprung up.

The site.

A municipality was established in Kándhla in November, 1873, and its affairs are now managed by a committee comprising fourteen members, of whom four hold office *ex-officio* and ten are elected by the tax-payers. The incidence of the octroi in 1874-75 was Re. 0-8-6 per head of the population. The following statements show the expenditure and receipts for four and a half months of 1873-74 and the entire year 1874-75 and the consumption per head during the same period:—

Municipality.

Statement showing import of taxable articles for 4½ months, 1873-74, and the year 1874-75.

Articles.	Net imports in 1874-75.		Consumption per head in 4½ *months*, 1873-74.		Consumption per head in *Year*, 1874-75.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Mds.	Rs.	Mds s. c.	Rs. a. p.	Mds. s. c	Rs. a. p.
Grain, ...	101,280	...	0 19 7	...	9 7 6	...
Sugar refined, ...	6	...	0 1 12	...	...	...
Ditto unrefined, ...	10,524	...	0 29 15	...	0 38 3	...
Ghi, ...	616	...	0 1 6	...	0 2 4	...
Other articles of food, ...	22,895	4,634	...	...	...	...
Animals for slaughter, ...	821	...	...	...	⅛th per head.	
Oil and oil-seeds, ...	2,942	...	0 1 9	...	0 10 10	...
Fuel, &c., ...	41	2,017	...	...	0 2 0	0 2 11
Building materials, ...	...	7,077	...	...	...	0 10 3
Drugs and spices, ...	...	9,275	...	0 5 5	...	0 13 7
Tobacco, ...	647	...	0 0 7	...	0 2 2	...
European and native cloth,	...	34,570	...	1 13 2	...	2 6 8
Metals, ...	228	...	0 0 3	0 0 8½	0 0 12	...

Statement showing income and expenditure.

Receipts.	1873-74.	1874-75.	Expenditure.	1873-74.	1874-75.
	Rs.	Rs.		Rs.	Rs.
Opening balance, ...	959	609	Collection, ...	514	940
Class I.—Food and drink,	1,108	4,392	Head-office, ...	71	226
„ II.—Animals for slaughter.	67	157	*a.* Superviison, ...	27	90
			b. Original works, ...	284	1,009
„ III.—Fuel, &c., ...	110	356	*c.* Repairs, ...	230	414
„ IV.—Building materials.	51	145	Police, ...	780	1,780
			Education, ...	...	89
„ V.—Drugs and spices.	76	187	Charitable grants, ...	58	62
„ VI.—Tobacco, ...	24	87	Conservancy,... ...	285	723
„ VII.—Textile fabrics,	360	523	Miscellaneous, ...	85	63
„ VIII.—Metals, ...	52	56			
Total Octroi, ...	1,848	5,903			
Fines, ...	84	109			
Pounds, ...	18	124			
Extraordinary, ...	34	6			
Miscellaneous, ...	...	38			
Total, ...	2,943	6,789	Total, ...	2,334	5,396

KÁNDHLA, a parganah of the Budhána tahsíl of the Muzaffarnagar district, is bounded on the north-west by Kairána; on the north-east by Shámli; on the west by the Jumna river; on the east by Budhána, and on the south by the Meerut district. According to the census of 1872, this parganah had then a total area of 106 square miles and 314 acres, of which 84 square miles and 90 acres were under cultivation. The area assessed to Government revenue during the same year was 102 square miles and 153 acres, of which 80 square miles and 217 acres were cultivated, 9 square miles and 115 acres were culturable, and 12 square miles and 460 acres were barren.

Physical features.

Kándhla lies to the south-west of the district and is intersected by the Karsuni or Krishni river on the east and the eastern Jumna canal on the west. Both have a course from north to south through the parganah. The villages to the east of the Krishni bordering on Budhána are rather high, but the soil is fertile; between the canal and the Krishni the soil is excellent; whilst to the west of the canal the soil, though somewhat inferior, is equal to the average of the neighbouring parganahs. A few villages here border on the Jumna, but there is very little *khádir* as the river runs between high banks. The only really poor land in the parganah is that situated on the slope leading from the uplands to the Krishni valley. A fair road runs from Budhána through Kándhla to Kairána, and another from Shámli through Ailam to Bágpat. The principal crop is wheat, but tobacco is also grown, and occasionally sugar-cane, which here often pays a rent of Rs. 18 per acre, whilst cotton pays Rs. 7-8-0 per acre. To the west of the Krishni there is a large

colony of Gújars "wonderfully transformed by the canal, and in some degree respectable themselves, though not the cause of respectability in others." They now find agriculture more profitable than thieving, and are a great contrast to their brethren in Bidauli. To the east of the Krishni the prevailing castes are Játs and Rajpúts settled in communities on the tenure known as bháyachára. In the whole parganah these number 51 against 17 pattidári and 10 zamíndári estates. The transfers from 1841 to 1861 amounted to 11,496 acres, or 17 per cent. of the total area. Only 2,714 acres, or 4 per cent. of the total area, changed hands by order of the civil courts. Játs lost 2,682 acres and Gújars lost 2,410 acres. Next to these come Rajpúts, Mahájans, Sayyids, Afgháns, and Shaikhzádahs. Mahájans lost 1,431 acres, but they bought in 6,330 acres. The Krishni prevents the extension of canal irrigation to the eastern half of the parganah, and the efflorescence of reh, through its influence, has injured a few hundred acres on the lower level. Water to the west is near the surface and well-irrigation was formerly in much use. The average canal-irrigation at last settlement was 818 acres, which rose to 10,078 acres in 1862. The following statement shows the statistics of the land-revenue at the past and present settlements:—

Land-revenue.

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p
1840, ...	67,403	8,179	7,482	5,143	15,060	31,539	46,599	1,00,759	2 4 8
1862, ...	66,973	9,669	948	6,027	38,806	11,523	50,329	1,11,410	2 3 5

The land-revenue for 1872, according to the census returns, amounted to Rs. 1,13,050 (or with cesses, Rs. 1,37,008), falling at a rate of Re. 1-10-6 per British acre on the total area, at Re. 1-11-8 per acre on the area assessed to Government revenue, and at Rs. 2-1-7 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 3,28,122.

Population.

According to the census of 1872, parganah Kándhla contained 57 inhabited villages, of which 11 had less than 200 inhabitants; 8 had between 200 and 500; 22 had between 500 and 1,000; 6 had between 1,000 and 2,000; 7 had between 2,000 and 3,000; and one had between 3,000 and 5,000. There are two towns possessing more than 5,000 inhabitants—Kándhla with 11,026 and Gangeru with 5,117. The settlement records show that there were 78 estates on the register in 1863. The total population in 1872 numbered 63,859 souls (29,127 females),

giving 602 to the square mile. Classified according to religion, there were 48,975 Hindús, of whom 22,193 were females, and 14,884 Musalmáns, amongst whom 6,934 were females. Distributing the Hindu population amongst the four great classes, the census shows 4,471 Brahmans, of whom 2,035 were females; 1,110 Rajpúts, including 399 females; 4,805 Baniyas (2,119 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 38,589 souls, of of whom 17,640 are females. The principal Brahman sub-division found in this parganah is the Gaur, numbering 4,304 souls in 1872. The Rajpúts belong for the most part to the Gaur (111) and Chhotiyana clans, and the Baniyas to the great Agarwál (4,665) sub-division. The principal castes amongst "the other castes" are the Budhi, Kahár, Chamár (6,282), Garariya, Juláha (1,267), Lohár, Kumhár (1,021), Hajjám (1,124), Sonár, Jogi (1,326), Máli, Khákrob (3,089), Ját (8,371), Gújar (4,932), and Saini (1,473). The Musalmáns comprise Shaikhs (13,062) and Sayyids (621).

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 494 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 2,276 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,750 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of animals or goods; 8,931 in agricultural operations; 3,433 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 3,759 persons returned as labourers and 814 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 3,906 as landholders, 20,910 as cultivators, and 39,043 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,733 males as able to read and write out of a total male population numbering 34,732 souls. Kándhla is an old Akbari parganah, which in 1816 comprised 41 villages, with an area of over 36,000 acres. It absorbed the old parganah of Gangeru, containing two villages, and Phugána with seven villages, in 1840.

KHÁTAULI, a town in parganah Khátauli of the Muzaffarnagar district, is distant 13½ miles from Muzaffarnagar. In 1872, there were 6,409 inhabitants, of whom 3,688 were Hindús (1,613 females) and 2,717 were Musalmáns (1,288 females), and four were Christians. Khátauli is situated in lat. 29°-17′ and long. 77°-46′-10″, and is made up of two villages, Khátaula and Khátauli. It is a place of increasing importance as a commercial mart for the exchange of country produce. There are four Jain temples and a large colony of Jains engaged in commerce. The bazar is a good one with

The site.

a well-paved road, and owing to its proximity to the Sindh, Panjáb and Dehli Railway is always a busy place. There is a first-class police-station, a branch post-office, and a school here. The stone bench-mark of the Great Trigonometrical Survey is imbedded near the Khátauli bridge on the left bank of the Ganges canal, to the south-west of the Meerut and Rúrki road, and shows a height of 789·82 feet above the level of the sea. The canal escape to the Káli nadi runs to the west of the town site. It consists of a cutting about three and a half miles long and 30 feet in breadth, which in March, 1869, showed "a swamp from end to end and its bottom and sides covered with impenetrable jungle." The site is well kept and clean, and efforts have been made to improve the drainage; still, however, fever breaks out at the cessation of the rains for several months. The water now stands in the wells at 11 feet from the surface where formerly it stood at 24 feet. Act XX. of 1856 (the Chaukidári Act) is in force, and in 1872 supported a police force of 21 men at a cost of Rs. 1,224 per annum, besides a staff of sweepers. The total income from all sources in 1872-73 was Rs. 2,477, giving an incidence of Re. 0-5-5 per head of the population and Rs. 2-0-4 per house. During the same year the number of houses assessed was 1,081 and the expenditure was Rs. 2,187. Khátauli lies on the route from Meerut to Landour and is distant 10⅝ miles from Daurála and 13⅛ miles from Muzaffarnagar. The road throughout is metalled and bridged and the country is open, level and well cultivated. Supplies and water are plentiful at Khátauli and the encamping-ground is good and shady. From Daurála the road passes Jasratpur at 3¾ miles, Dádri at six miles, and Tigari at 9 miles. To Muzaffarnagar, the road crosses the Ganges canal close to Khátauli, thence by Bhainsi (1¾ miles), Naula, Akbarpur, Husainpur, Beopára, Begharazpur, Wahalna and Sujru. Some account of the prices ruling in the bazar at Khátauli will be found under the district notice. Though a small town it is now one of the most rising in the district, and has already attracted a considerable number of enterprising Jaina grain-dealers to it. During the Bengal famine, Khátauli formed the outlet for all the surplus grain in the district and its railway-station presented a busy scene during the export season, as many Calcutta merchants had their grain stored here to await transport.

KHÁTAULI, a parganah of the Jánsath tahsíl of the Muzaffarnagar district, is bounded on the north by parganah Muzaffarnagar; on the west by parganah Shikárpur; on the east by parganah Jánsath, and on the south by the Meerut district. According to the census of 1872, this parganah had, then, a total area of 97 square miles and 198 acres, of which 78 square miles and 557 acres were under cultivation. The area assessed to Government revenue during the same year was 81 square miles and 486 acres, of which 63 square miles and 602 acres were cultivated, 10 square miles and 102 acres were culturable, and

7 square miles and 422 acres were barren. The Ganges canal runs with a south-westerly course through the centre of the parganah, and the west Káli nadi forms its western boundary. The central tract is level and fertile and possessed of every advantage of soil, irrigation and population. It is covered with a net-work of canal channels, and everywhere villages imbedded amongst mango groves attest the industry of its Ját cultivators. In the north and east corner the land is somewhat broken near the Káli, and even when the level plateau is reached the soil is poor and sandy. This portion of the parganah gradually slopes towards the depression which forms the source of the east Káli river, and the river here intersects five estates and cuts off three, in the south-east corner, from the rest of the parganah. Parallel to and east of the river is a high ridge of sand which brings down the average quality of the estates through which it passes. From north to south a high belt of land, broken here and there by trifling tributaries of the Káli, runs through the parganah close to the river until near the southern boundary, where it branches into two lines of sand which enter the Meerut district. The villages along this ridge possess good land to the east of and up to the village site, and a small extent of high sandy soil, beyond which the country soon slopes down into the lowland of the river. Two other lines of sand come down the parganah from the north and continue as ridges for some distance; indeed, sand crops out, here and there, all through the parganah. These sand-hills do not, however, affect the slope of the country, nor do they, except in the north-east corner and to the east of the East Káli, interfere with the character of the cultivation. The Káli has, of late years, caused considerable damage to the villages on its bank, owing to its use as a canal escape. There is a slight depression to the south of the parganah which drains into the East Káli, and a little to the north are two other drainage lines which used to carry off the surplus waters from the neighbourhood of Khátauli and were in former days of some advantage to the cultivation, but the canal, besides depreciating the relative value of these depressions, has seriously injured the low-lying fields, and what with drainage obstruction and over-saturation, the state of the tract is such as to fully warrant the reclamation measures contemplated. In 1863, Mr. Grant noted that some damage had been caused by a stream called the Rawa having been used as a canal escape, thus turning a drainage channel into a perennial stream.

General appearance.

The soil of the parganah is, for the most part, a good loam, though sand occurs more or less. High cultivation, however, is slowly but surely overcoming in many portions of the parganah this occasional defect in the natural quality of the soil, and although 14·5 per cent. of the cultivated area in the assessed villages is dry sand and a similar area is dry sandy-loam or second *rauslí*, in many of the highly cultivated villages, sand is gradually being eliminated from the records, and in this the poorest

Soils.

of all soils, manure and water now enable the cultivators to grow the best crops. In the central tract, one-third was formerly irrigated from wells, and in 1861-62, canal irrigation had reached one-half of this area. In 1871-72 the area under irrigation from the Ganges canal amounted to 11,698 acres, and the total wet area was 30,416 acres, or 61 per cent. of the total cultivated area.[1] The crops grown in the *kharíf* were 59 per cent. of the total cultivation in 1872, and amongst them sugar-cane occupied 9·3 per cent. of the total cultivated area; cotton, 3·7 per cent.; maize, 2·2 per cent.; *munji* or fine rice, 2·7 per cent.; *dhán* or coarse rice, 4·7 per cent.; *joár*, 2·3 per cent.; fodder, 12; *urd*, 7·5, and *moth*, 7·5. In the *rabi*, wheat covered 34·8 per cent. of the total cultivated area, and gram 4 per cent., whilst 2,848 acres were twice cropped, chiefly with gram, wheat and peas. In 1841 sugar-cane occupied 5 per cent. of the total cultivated area; cotton, 3 per cent.; coarse rice, 3 per cent., and wheat, 30 per cent. In 1863, sugar-cane occupied 11 per cent.; cotton, 3 per cent.; *dhán* 1·5 per cent.; *munji*, 1·5 per cent., and wheat, 26 per cent. From this it appears that the area under sugar-cane has nearly doubled and the rice-area has more than doubled and has also improved in quality. The parganah throughout is fairly wooded and contains 874 acres under regular plantations. In communications the parganah is singularly fortunate, possessing as it does good metalled roads, a railway and a navigable canal.

Crops.

The settlement under Regulation IX. of 1833 was made by Mr. E. Thornton in 1840, and the revision was made by Mr. C. Grant in 1862, but his assessment was disallowed in 1868, and Mr. A. Cadell was directed to make a fresh revision, which was completed in 1873-74. The following statement gives the statistics of the three revisions as recorded by Mr. Cadell:—

Fiscal history.

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres	Acres.	Rs.	Rs. a. p.
1841, ...	62,228	8,013	7,699	8,200	10,812	27,504	38,316	65,879	1 11 6
1863, ...	62,278	6,548	8,899	6,467	19,886	20,478	40,364	66,311	1 10 3½
1871, ...	62,289	6,412	8,898	4,757	24,327	17,895	42,222	67,295	1 9 6
Mr. Martin, ...	59,683	6,548	6,304	6,467	19,886	20,478	40,364	66,311	1 10 3½
1874, ...	62,293	6,408	8,876	4,786	24,284	17,939	42,223	88,106	2 1 5

[1] Taking the revenue-paying area alone, irrigation has increased from 10,812 acres in 1841 to 19,886 acres in 1863 and to 24,327 acres in 1871, or 125 per cent., and of this 3,497 acres are watered from wells, 415 from tanks and rivers, and the remainder from the canal, of which, however, 6,900 acres would have been watered from wells: and so far the canal-power is wasted.

The fourth line gives the statistics taken from the parganah books of 1861 and the fifth line gives the figures of the returns made by Mr. Cadell in 1875. The difference is due to the inclusion in Mr. Cadell's figures of the revenue-free patches in assessed estates. The figures of 1871 show that the assessable area amounts to only 70 per cent. of the total area, and of it ten per cent. remains uncultivated, while 670 acres are under groves. Cultivation, however, occupies 63 per cent. of the total area, and has increased by 4,972 acres, or 13 per cent., since 1841. The soils of the cultivated portion of the area in 1871 are given at page 351.

Circles.

It was on the soil statement and the proportional prevalence or otherwise of sand in the soil that Mr. Cadell mainly based his division of the parganah into three circles for the purposes of assessment. His first circle comprised 26 villages down along the central tract, containing only 3·5 per cent. of sand and having 95 per cent. of the culturable land under crops, and of this 84·5 per cent. was irrigable. In every way this is a most fertile and prosperous tract and is inhabited by the more industrious classes of cultivators, such as Játs and Rawas. The lands immediately to the east and west of the first circle comprised the second circle, and also extended from north to south through the parganah. It contained 38 estates, with 12·5 per cent. of sand in the soil of the cultivated area, and the greater portion of the area was cultivated by tenants of the best classes. The third or worst circle comprised 24 estates situated chiefly in the south-east and south-west corners of the parganah, and, with the exception of three estates, inhabited by the less thrifty castes. The soil too is inferior, and, even though farmed by the most industrious peasantry, could hardly equal the average of the parganah. To these circles the following rates per acre were applied :—

Circle.	Bárah.	1st rausli.	2nd rausli.	Dry or 1st rausli loam.	Dry sandy loam or 2nd rausli.	Dry sand.
	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.
1st circle, ...	12 0	7 2	4 14	3 12	2 10	2 0
2nd ,, ...	12 0	6 0	4 8	3 6	2 4	1 8
3rd ,, ...	9 0	5 4	3 12	3 0	2 0	1 2

with the result of a rental on the assumed rent-rates of Rs. 1,92,497. The rent-rates of Mr. Thornton's assessment in 1841 assumed assets[1] valued at Rs. 1,01,461, on which, at 65 per cent., Mr. Thornton assessed a revenue of Rs. 67,288. This would show that the rental has nearly doubled and that the rent-rates have risen 50 per cent. since 1841, were it not nearly certain that the rates of the old settlement were very low. The real rise in rent has not

[1] The rent-roll assumed in 1863 was Rs. 1,22,997.

been more than 20 per cent., and in the best estates it has been less. But however slight the rise in the rent-rates may have been, the increase to the rental has been very great. Dry land has become irrigated, careful cultivation has been extended, sand has almost disappeared from many estates, and the number of highly farmed villages has increased. A great part of the increased rental is due to the canal, and taking its influence on the rental at the all-round rate of three rupees per acre, Mr. Cadell estimated the increase of the revenue due to the canal in this parganah at Rs. 17,000 on 10,812 acres. The assessment at half assets, given by the assumed rates, amounts to Rs. 94,785, being an increase of Rs. 27,497 over the assessment of 1841, and of Rs. 28,474 over that of 1863. "The increase," writes Mr. Cadell, "appears to be enormous, but the advance in prosperity made by the parganah has also been very great, and an assessment in exact accordance with the new rates would fall at rates which are fully justified by those of all adjoining parganahs in any way similar to Khátauli, whether situated in this district or in Meerut." The revenue ultimately assessed amounted to Rs. 88,106, falling at Rs. 2-1-5 per acre on the cultivated area,[1] and came into force from the revenue year 1872-73.

Population.

According to the census of 1872 parganah Khátauli contained 70 inhabited villages, of which 17 had less than 200 inhabitants; 20 had between 200 and 500; 22 had between 500 and 1,000; seven had between 1,000 and 2,000; and three had between 2,000 and 3,000. The settlement records show that there were 88 estates on the register in 1863, of which 17 had no inhabited site, while two more have only been recently settled, and the hamlets in not a few of those that remain are quite recent colonies sent out by the strong village communities or more recently settled by the landlords. The total population numbered 49,267 souls (22,391 females) in 1872, giving 508 to the square mile. Classified according to religion, there were 36,896 Hindús, of whom 16,641 were females; 12,366 Musalmáns, amongst whom 5,750 were females; and five Christians. Distributing the Hindu population amongst the four great classes, the census shows 2,158 Brahmans, of whom 966 were females; 1,843 Rajpúts, including 1,843 females; 2,857 Baniyas (1,270 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 30,038 souls, of whom 13,662 are females. The principal Brahman sub-division found in this parganah is the Gaur, numbering 2,094 souls in 1872. The Rajpúts belong for the most part to the Gaur (856), Kachhwáha (128), Surajbansi and Badgújar clans, and the Baniyas to the great Agarwál (2,253) and Saraugi (560) sub-divisions. Amongst the other castes, the most numerous are the Taga (906), Budhi, Kahár, Chamár (8,612), Gararíya (1,072), Kumhár, Hajjám, Jogi, Bhangi (1,748), Ját (2,730),

[1] For further information on the assessment of this parganah see Revenue Rep., I. (N.S.), 152.

Gújar (1,695), Rorh (3,075), and Saini (2,820) castes. The Musalmáns comprise Shaikhs (10,537), Sayyids (873), and Mughals (28). The cultivating classes are chiefly Rawas, Játs, Tagas, Sainis, Gújars, and Rajpúts. The distribution of the land amongst the proprietary classes is given in the district notice. Sayyids still own one-fourth of the parganah, next comes the Marhal Nawáb of Karnál, and then Mahájans, Bohras, Rajpúts, Játs, Tagas, and Patháns in the order named. The Rajpúts are orderly and respectable, and the Gújars have, almost without exception, got canal-irrigated land to cultivate and pay high rates without difficulty. In 1863, owners cultivated 8,582 acres, occupancy tenants 19,565 acres, and tenants-at-will 12,127 acres; and in 1872 the numbers were, owners, 8,792 acres; occupancy tenants, 22,711 acres; and tenants-at-will, 10,718 acres, in the revenue-paying area.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 239 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 2,293 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,416 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 1,763 in agricultural operations; 2,631 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 3,483 persons returned as labourers and 374 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 614 as landholders, 18,174 as cultivators, and 30,479 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,184 males as able to read and write out of a total male population numbering 26,876 souls.

History.

Khátauli represents portions of the old Akbari parganah of that name. At the redistribution of villages, in 1854-55, it was constituted as follows:—From the old Khátauli parganah, 80 estates; from Muzaffarnagar, 2; from Púr, Bhukarheri, and Deoband in Saháranpur one each, and from Hastinápur in Meerut, 3; total, 88. Khátauli formerly belonged to the Mansúrpur and Khátauli branches of the Bárha Sayyids. The former still retains much of its old possessions, but a great portion of the parganah has of late years fallen into the hands of the Marhal Nawáb of Karnál. Khátauli formed a portion of the *jágír* granted by Sháhjahán to his Sayyid minister, Muzaffar Khán Khánjahán, and was owned, at one time, entirely by Sayyids, with the exception of a few Pathán villages transferred from Meerut and two revenue-free villages held by Shaikhs. From the time of Sháhjahán, the Mansúrpur branch of the Sayyids

held proprietary rights in the eighty estates then comprising the parganah. Of the eight estates added since 1841, three were owned by Patháns, two by a collateral branch of the Tihanpuri Sayyids, and three by the Sayyids of Ghálibpur, a branch of the Sambalhera family, and of the 88 estates now comprised in the parganah, Sayyids, therefore, owned 80. But before the conquest in 1803, and partly by purchase and partly owing to the decline of Sayyid influence, Rajpúts recovered eight villages in the south-east corner of the parganah where they once held a *chaubisi* (24). The present head of this Rajpút colony is the Chaudhri of Chandsena. Extravagance and debt commenced the ruin of the Sayyids. Some fifty years ago, eleven of their estates were sold and four more were purchased from them. In most of these cases native officials were the purchasers, but the cause is found in the high assessments that obtained and the unwillingness of capitalists to invest in land. Seven of these villages passed into the hands of the Ját and Taga cultivating communities and five of the remaining estates were bought from the native officials by the Jánsath Sayyids. Long before 1841, owing to the dishonesty of an agent, the Khátauli Sayyids were obliged to mortgage sixteen of their best villages to a Meerut Baniya, who transferred them to the Marhal Nawáb of Karnál, with whom they have remained, with the exception of those which the Játs of Maulaheri successfully claimed. Several others, also, of their best estates had passed away, so that practically the original proprietors had lost the greater portion of their possessions before 1841, and the sales entered in the district notice of transfers between 1841 and 1861 refer, for the most part, to sales of mortgaged property. Since 1841, the Mansúrpur branch has gone steadily to ruin, and it is not likely that its present representatives will retrieve its losses. In the south-east corner of the parganah, the Sayyids of Ghálibpur and the Patháns of Jasáola have succumbed to the Baniya, and the Sayyids of Kailawadha have lost a portion of their possessions by litigation. The Khánjahánpur branch of the Mansúrpur house has survived the general wreck, the liabilities of the family having been provided for by a mortgage which has now expired. Another branch of the same family still owns a few minor villages and the Sarái Sayyids retain half their old possessions. Altogether, though Sayyids have purchased largely, the Sayyids taken as a whole do not now own more than one-fourth of the parganah, and one-half of this is held by Sayyids who do not represent the original owners. Játs, Tagas, Patháns and Rajpúts have held their own since 1841 and lost little. Still nearly two-thirds of the area (38,197 acres) have changed hands between 1841 and 1871. During the last nine years of this period the average price per acre realised at private sales (Rs. 30-9-1) has been three times that received from 1841 to 1861 (Rs. 10-4-10), and the mortgage rate has risen to double that of the same period, but, as in other parganahs of the district, by far the greater portion of the transfers seem to be in no way due to

the pressure of the Government revenue assessed at Mr. Thornton's settlement. "The steadily increasing value of land," writes Mr. Cadell, "when it can be attributed to peace, security and improved communications, is a matter for congratulation; but, in the case of this parganah, there can be little question that the increased value is, in a great measure, due to causes which do not necessarily involve any large amount of administrative success—to the lowering of the share of the assets taken by the supreme landlord (the State), to the division with the landlord of the profits arising from the construction of the Ganges canal by Government—and, to a less extent, to the abolition of the peculiar privileges of the tenants in the so-called *Sharah nakdi* villages. In these estates the entire management was left with the heads of the cultivating communities. The tenants had complete control over the waste land, village site, tanks and trees; they paid the revenue, cesses, and the profits of the landlord, amounting to 18 per cent. on the assessment, in a lump sum; and it was distinctly stipulated that if any tenant failed, the community must make good the loss: that the landlord's claim was against the community, not against the individual. When these tenants were reduced to the rank of ordinary occupancy tenants, when canal irrigation was supplied at rates which, according to the estimate of the Board of Revenue, added, even when the Government share of the enhancement is secured by revision of settlement, not less than one rupee per acre to the income of the landlord, when the Government share in the assets of the land was limited for all future time to one-half instead of the old two-thirds, it is not to be wondered at that the price of land should quickly rise. Whatever opinion may be held as to the good policy or otherwise of the measures which have caused the rise in the value of land, there can be little question that one result of the rise is, that the purchase by tenants of ordinar y revenue-paying land is now almost as hopeless a matter as the acquisition of revenue-free land was 30 years ago."

Causes of increased value of land.

The early fiscal history of the parganah is not now traceable, but although transfers may, in former days, have been due in some measure to the rigidity of our collections, they cannot be attributed to the heaviness of the assessments. Mr. Thornton's assessments were generally moderate, and where heavy, as in the 18 per cent. villages, the cultivators, not the landlords, were responsible. In the very heavily assessed estate of Bhainsi there have been mortgages of occupancy rights, but the fact that tenants paying a high rental have broke down does not necessarily show that the Government assessment was too severe. Though successive droughts have passed over the parganah, but a few trifling suspensions of the State demand were found necessary as a relief. "Indeed, where the assessment has been so light, coercive processes could hardly have been required; and even

Fiscal history.

if they had been, they might very possibly not have appeared as such in any return. Coercive processes have become unknown, not because they are never required, but because they have been discouraged by the extreme attention which is now paid to figured statements. Even if a village broke down, no ordinary tahsíldár would think of recommending sale or farm. He would bring the men in arrears into communication with capitalists; in other words, he would force the people to sell or mortgage: and the calamity which led to the arrear would cause an additional private transfer, but would leave no trace in any annual return."

KOTESRA, a village in parganah Charthawal of the Muzaffarnagar district, is distant 11 miles from the civil station. There were 2,663 inhabitants in 1872, principally Musalmán Tagas. The houses are mud-built and many are surrounded by trees. The site is rather low, but the ways are wide, and there are a good number of Baniyas resident who carry on a trade in sugar. The well-water is good and is found at a depth of thirty-seven feet from the surface. Some decayed Sayyid families reside here, and on the south of the town is an old ruined fort which still belongs to them. "It is a remarkably large brick-built place with corner towers and cupolas, of which much remains; but the owner lives in a thatched shed set against the wall his fathers built." Kotesra possesses a school with a small attendance of pupils.

LOHÁRI, a large village in parganah Thána Bhawan of the Muzaffarnagar district, is distant 17 miles from the civil station. In 1865, the population numbered 4,309 souls, and in 1872 the numbers were 4,170, chiefly Musalmáns. The soil is light, sandy and porous, and grows, to the west, rice, and in the spring, wheat. There are a few mango groves. The Krishni nadi forms the drainage line and flows about three miles to the west, and on the east a canal channel affords some irrigation. Good drinking-water is obtained from masonry wells which give a level of twenty feet from the surface in high ground. The site lies within an old fort still surrounded by a ditch which retains much stagnant water. The people have suffered much from sickness, and here, as elsewhere, much attention is required to perfect the sanitation of the village. Fever and small-pox are the principal diseases, and occasionally cholera when epidemic in the district. There is a market-day every Wednesday. Formerly Lohári was a thriving town, it is now little better than a respectable agricultural village.

MANSURPUR, a village in parganah Khátauli of the Muzaffarnagar district, is distant 8 miles from the civil station. The population in 1865 numbered 2,450 souls and in 1872 there were 2,767 inhabitants. Mansúrpur is an agricultural village on a low site surrounded by rice and sugar-cane cultivation, and with numerous water-holes from which the earth for constructing the village huts have been taken. The water level in the wells varies from ten to eighteen feet from the surface with a depth of fifteen feet. A large water-hole on the west known as the "jhíl" leaves a large surface of mud exposed during

the hot weather which forms a pregnant source of fever. Mansúrpur is named after Sayyid Mansúr, the son of Khánjahán Tihanpuri, who received the parganah in *jágír* from Sháhjahán.

MÍRÁNPUR, a town in parganah Bhúma Sambalhera of the Muzaffarnagar district, is distant 20 miles from the civil station of Muzaffarnagar. The population in 1853 was 5,574 and in 1865 was 6,043. In 1872 there were 5,924 inhabitants, of whom 3,883 were Hindús (1,895 females) and 2,041 were Musalmáns (971 females). The Chaukidári Act (XX. of 1856) is in force, and in 1872 supported a village police numbering 21 men of all grades at a cost of Rs. 1,224 per annum, besides a staff of scavengers. The total income from all sources in 1872-73 was Rs. 3,191, giving an incidence of Re. 0-7-4 per head of the population and Rs. 2-14-9 per house. During the same year the number of houses assessed was 936, and the expenditure was Rs. 2,409. There is a first-class police-station and a post-office here. The Sayyids of Míránpur are descendants of Haidar Khán, son of Sayyid Sálár Chhatrauri, for an account of whom see the district notice under "History." Míránpur was held by Mr. Palmer during the close of the year 1857. On the 4th February, 1858, the Bijnaur rebels crossed the Ganges and attacked the town. The police-station was burned and three men were killed. On the arrival of troops from Jauli, the rebels retreated, covering their rear-guard with a party of 250 mutineer cavalry. A little skirmishing took place, but with only one man wounded on the British side, whilst three rebels were killed and two were taken prisoners. The rebels expected the Sayyid zamíndárs to join them, but no man of importance did so.

MORNA, a village in parganah Bhukarheri of the Muzaffarnagar district, is distant 15 miles from the civil station. The population in 1865 numbered 810, and in 1872 there were 1,523 inhabitants. It is a dirty village situated in the midst of a sandy plain, with a great excavation filled with stagnant water on the west. The water level in the wells is 40 feet from the surface. Morna is celebrated for the manufacture of excellent blankets and a good breed of sheep. The Sayyids of Morna belong to the Chhatrauri branch of the Bárha Sayyids, for an account of whom see the district notice under "History." For services rendered to Muhammad Shah, members of this family received grants of land to the west of the Káli in Charthawal. Up to the middle of the last century, Morna was the principal town in the parganah, but its proximity to the Pathán fort of Shukartár was fatal to its security. In 1759 and again in 1772 Shukartár was invested by the Marhattas, who made Morna their head-quarters, and on their departure reduced it to a small village, which it still remains.

MUZAFFARNAGAR, the head-quarters of the Muzaffarnagar district, is situated in the parganah of the same name in lat. 29°-28′-10″ and long. 77°-44′. Muzaffarnagar in 1847 had 7,264 inhabitants, in 1853 the numbers were 9,646, and in 1865 they increased to 10,748.

Population.

The population in 1872 numbered 10,793 souls, of whom 6,560 were Hindús (2,792 females), 4,205 were Musalmáns (1,884 females), and 28 were Christians. Distributing the population amongst the urban and rural classes proper, the returns show 113 landholders, 343 cultivators, and 10,337 persons following occupations unconnected with agriculture. The number of enclosures in 1872 was 1,327, of which 751 were occupied by Hindús and 567 by Musalmáns. The number of houses during the same year was 2,646, of which 1,015 were built with skilled labour, and of these 757 were occupied by Hindús and 249 by Musalmáns. Of the 1,631 mud huts in the town, 895 were inhabited by Hindús. Taking the male adult population (not less than fifteen years of age), we find the following occupations represented by more than fifty male adults: Bakers, 51; beggars, 110; blanket-weavers, 85; butchers, 63; cultivators, 255; labourers, 736; landowners, 78; money-lenders, 51; porters, 51; potters, 74; servants, 1,330; shop-keepers, 561; shoe-makers, 52; sweepers, 66; and weavers, 163. Other occupations common in a small semi-agricultural town are also found. The same returns show only 1,007 males and two females out of the whole population as able to read and write.

Public offices.

Muzaffarnagar was founded by the son of Muzaffar Khán Khánjahán in the reign of the Emperor Sháhjahán about 1633 A.D. The town itself is closely built and crowded with many small lanes having a very narrow roadway. There is a good dispensary, and the civil surgeon of the district resides here. The other public buildings are the district court and tahsíli offices, the jail and schools. There is a telegraph-office at the station of the Sind, Panjáb and Dehli Railway, and passenger trains communicate twice daily with Meerut to the south and Saháranpur to the north. The stone bench-mark of the Great Trigonometrical Survey is imbedded on the north side of the post-office and near the general mile-post. It shows a height of 790·01 feet above the level of the sea.

Sanitation.

The people have suffered very much of late years from malarious fever, due partly to the increase of moisture caused by the canals and partly to the natural unhealthiness due to inattention to cleanliness and drainage. In 1868, the roads and lanes were found to be much broken, and holes that retained the surface drainage water and open drains and cess-pools might be seen in every direction. Around the town there were many large excavations from which the mud for building the usual class of house had been taken and were then used for latrine purposes. To these causes and the cultivation of high crops close to the town the sickness for which this station was noted in 1868-70 was no doubt partly due. The canal must be charged with the rise in the water-level, but that the other causes mentioned above have contributed their share is shown by the remarkable fall in the fever-rate following on the prohibition of the growth of high rain-crops

and the use of irrigation near the town, coupled with the drainage of some of the more offensive water-holes. Since 1870, however, the drainage of the civil station and railway buildings has been effected to the Káli nadi with much success; several streets have been paved with brick and more attention has been paid to conservancy arrangements, so that now it can compare favourably with most towns in the division. A new market-place has been built on a waste piece of land bordering the high road, and altogether Muzaffarnagar shows a marked improvement in many respects during the last five years. The encamping-ground for troops is situated on the left bank of the Káli nadi, to the west of the civil station. Muzaffarnagar lies on the military route from Meerut to Landour; 13⅞ miles from Khátauli and 15½ miles from Deoband. From Khátauli the road is metalled and bridged and the country is open, level and well cultivated; the road passes from Khátauli over the Ganges canal by a bridge, thence by Bhainsi (1¾ miles), Naula, Husainpur, Begharazpur, Jakhrauda, Wahalna, and Sujru. From Muzaffarnagar the road is metalled for five miles and afterwards is heavy; leaving the Rúrki road at 4 miles, and crossing the Káli nadi by a bridge at 5 miles and thence by Baheri and Ruhána. Proceeding to Rúrki, the next stage is Púr (16¾ miles); the road is metalled and bridged and passes through a well-cultivated country: it leaves the Saháranpur road at 4 miles and passes by Sisauna, Chhapár (9 miles), Barla and Phalauda.

Municipality.

The municipality was established in November, 1872, and comprises a committee of twelve members, of whom four are official and eight are elected by the tax-payers. The incidence of the octroi in 1873-74 was Re. 1-4-7 per head of the population. The following statements show the imports and consumption per head and the income and expenditure of the municipality for two years:—

Statement showing import of taxable articles for two years into Muzaffarnagar.

Articles.	*Net imports in*		*Consumption per head in*	
	1873-74.	1874-75.	1873-74.	1874-75.
	Value.	Value.	Value.	Value.
	Rs.	Rs.	Rs. a. p.	Rs. a. p.
Grain, ...	2,05,005	1,73,186	18 15 10	16 0 2
Sugar refined, ...	1,737	...	0 2 0	...
Ditto unrefined, ...	39,388	...	3 10 3	...
Ghi, ...	34,869	34,031	3 3 8	3 2 5
Other articles of food, ...	19,206	18,149	1 13 0	1 11 6
Animals for slaughter, ...	3,207No.	4,389No.	½ per head.	½ per head.
Oils and oil-seeds, ...	21,633	11,942	2 0 3	1 1 8
Fuel, &c., ...	5,791	4,515	0 8 7	0 6 8
Building materials, ...	29,298	30,808	2 11 5	2 13 8
Drugs and spices, ...	27,993	28,138	2 9 5	2 9 8
Tobacco, ...	12,815	12,765	1 2 11	1 2 11
European and native cloth, ...	1,40,971	1,46,263	12 0 11	12 6 4
Metals, ...	25,989	28,646	2 6 6	2 10 5

Statement showing the income and expenditure for two years.

Receipts.	1873-74.	1874-75.	Expenditure.	1873-74.	1874-75.
	Rs.	Rs.		Rs.	Rs.
Opening balance ...	5,048	4,817	Collection, ...	1,814	1,249
Class I.—Food and drink...	9,087	6,695	Head-office, ...	225	242
„ II.—Animals for slaughter,	264	498	*a.* Supervision,... ...	294	312
			b. Original works, ...	4,176	4,518
„ III.—Fuel, &c. ...	361	228	*c.* Repairs, ...	1,689	1,525
„ IV.—Building materials.	508	517	Police, ...	2,354	2,270
			Education, ...	192	163
„ V —Drugs and spices	617	611	Charitable grants, ...	96	253
„ VI.—Tobacco ...	285	266	Conservancy, ...	1,592	1,606
„ VII.—Textile fabrics	2,253	1,458	Road-watering, ...	284	193
„ VIII.—Metals ...	514	297	Lighting, ...	608	449
			Miscellaneous,... ...	5,003	3,834
Total Octroi ...	13,889	1,0,480			
Rents	445	640			
Fines	114	95			
Pounds	264	589			
Extraordinary ...	3,076	...			
Miscellaneous ...	134	235			
Total ...	23,100	16,856	Total, ...	18,293	16,614

MUZAFFARNAGAR, a parganah in the tahsíl of the same name in the Muzaffarnagar district, is bounded on the north by the Saháranpur district; on the west by parganahs Charthawal and Baghra; on the east by parganahs Púr Chhapár and Bhukarheri, and on the south by parganahs Jánsath, Khátauli, and Shikárpur. According to the census of 1872, this parganah had, then, a total area of 108 square miles and 416 acres, of which 80 square miles and 173 acres were under cultivation. The area assessed to Government revenue during the same year was 92 square miles and 351 acres, of which 67 square miles and 390 acres were cultivated, 12 square miles and 339 acres were culturable, and 12 square miles and 262 acres were barren. The west Káli nadi enters the parganah at Ruhána Buzurg on the north, and, running to the south-west, forms for a short distance the western boundary and again flows due south. Close to the town of Muzaffarnagar, a belt of sandy hillocks runs down the centre of the parganah some miles east of the civil station. On both sides of these hills are some inferior *bhúr* villages in which the sand continually shifts about from place to place. The thirteen villages situated to the west of the Káli possess good soils in the level uplands, indifferent land on the slope, and fair fields for the most part along the river. To the south the land is tilled and in part owned by Játs; well-irrigation is general, the farming is careful and masonry wells and mango groves abound under the security afforded to the Játs by Mr. Thornton's settlement. The five estates to the north are uninhabited and are cultivated by non-resident tenants and possess little level land. Here the Taga owners and cultivators have not sunk masonry wells, and earthen ones are

General appearance.

difficult of construction and last but a short time. Altogether, with the exception of the Ját villages of Maulaheri and Luchaira, the estates are of middling or inferior quality. East of the Káli, the slope towards the river is much more gradual, and towards the west and south, except where percolation from the canal has water-logged the soil, there is uninterrupted cultivation to the river. To the north of the parganah sand appears and prevails as the eastern boundary is approached. At some distance from the boundary the sand rises into the high ridge already noticed, and running from north to south diverges to the west, to form the southern boundary of the parganah. Between the estates adjoining this ridge on the west and those lying along the river are ten or twelve good estates which obtain a plentiful supply of canal water from the right main rajbaha and its four branches which intersect the parganah. To the east of the sandy ridge are ten estates, eight of which receive a fair supply of water from the canal, and altogether in by far the greater portion of the parganah the water-supply is good. In forming his assessments, Mr. Cadell placed twelve estates in the first class, ten of which lie between the second-class estates on the river and the second-class estates to the west of the sand ridge, and one lies to the extreme north of the parganah adjoining the sand ridge and another in the extreme south-east corner. The second-class, comprising sixteen estates, is fully irrigated, and in the third class, comprising thirty estates, are placed all those in which the water-supply is uncertain.

Fiscal history.

The settlement under Regulation IX. of 1833 was made by Mr. E. Thornton in 1840 and expired in 1860. The measurements and inspection for the new assessment were completed by Mr. H. G. Keene in 1861, and the assessment itself was made by Mr. S. N. Martin in 1862-63, but this was cancelled by Government in 1867, and Mr. A. Cadell was instructed to make a fresh assessment which was brought to a conclusion in 1873-74. The following statement shows the statistics of these three revisions as given by Mr. Cadell:—

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
1841 ...	68,144	8,150	12,037	8,099	3,133	36,725	39,858	60,187	1 8 2
1862 ...	69,538	7,844	11,449	8,328	21,664	20,253	41,917	68,472	1 10 1
1871-72 ...	69,491	7,153	10,297	5,564	20,982	25,495	46,477	72,758	1 9 0
Mr. Martin,	61,021	7,844	2,932	8,328	21,664	20,253	41,917	68,422	1 10 0½
1874 ...	69,554	7,292	10,276	5,550	20,662	11,471	46,436	82,160	1 12 4

The fourth line gives the figures of Mr. S. N. Martin's final settlement report and the fifth line gives the figures of Mr. Cadell's returns of 1875. The

difference is mainly in the area held free of revenue. Adding the 7,926 acres cultivated in the revenue-free lands, the total cultivated area amounts to 54,413 acres, or 78·25 per cent. of the total area and 88·5 per cent. of the arable area. Of the culturable area 426 acres were under groves in 1874. Omitting the revenue-free area, 10·7 per cent. of the culturable area was uncultivated in 1871-72 and 89·3 per cent. was under the plough. The progress of irrigation between 1840 and 1860 has been most marked in this parganah and has had a very beneficial effect in increasing the cultivated area and improving the character of the crops sown. In 1840 there was no irrigation from canal, whilst in 1861-62 the area watered by the Ganges canal amounted to 11,662 acres, and in 1870-71 this had increased to 15,132 acres. In the canal-irrigated tract wells have been almost entirely superseded, and the saving of labour has been considerable. In 1862, Mr. Martin estimated the amount of revenue due to canal irrigation in this parganah as Rs. 8,830, and Mr. Cadell in 1871 placed it at Rs. 20,000, or, if revenue-free estates be omitted, at Rs. 16,750, giving an enhancement of assets equal to about Rs. 2·8 per acre. The area entered as irrigated by the canal is naturally much less than the irrigable area, and 16,000 acres may be taken as the area which can be easily irrigated in ordinary seasons, leaving one-third more for the irrigable area, but not watered, which falls well in with the estimate of 22,685 acres made by the settlement officer as the potential area of irrigation for the whole parganah, including revenue-free land.

Irrigation.

The parganah has advanced more from this increase of irrigation than from the greater area brought under the plough, and here, as in Saháranpur, its moral effect on the community has been remarkable. Mr. Cadell writes:—"A Ját, a Jhojha or a Gára can, as there are still in this district dry estates enough to show, cultivate with almost unsurpassable industry, although even his sugar-cane is entirely dependent on the seasons; but with the less industrious castes it is different. Increased certainty of the result gives the required incentive to industry, and both on the east and west side of this district there are many Rajpút and Gújar communities which have been, comparatively speaking, reformed by what without exaggeration appears to be the most effectual civilizing agent at our disposal—canal water given flush. Indeed, when the value of canal irrigation is discussed, it might be well to consider, in addition to the immediate revenue and the prevention of famine, not only the effect of the canal upon the land-revenue, but its influence upon the more unruly classes. It is at all events curious to notice the comparative oblivion into which once notorious communities have passed since their estates came under irrigation from the canal, while their neighbours of the same clan, and the same old habits, but without any fresh inducement to adopt an honest life, have more than upheld their ancient evil reputation. In this parganah there were no specially notorious

communities, but even the best of the idler classes have benefitted from the increased inducement to industry, and the best crops are now grown in fair proportions where formerly they were entirely or almost unknown." Taking the total irrigated area in 1841 as 3,500 acres, there has been an increase of 17,482 acres, or nearly 500 per cent. Nor is the progress in this respect at an end, for the decrease since 1863 is partly due to more accurate registration and to the prohibition of canal-irrigation in Muzaffarnagar and in portions of the three adjacent townships on sanitary grounds.

Crops.

The increase in irrigation to the west of the Káli is really only nominal except in the estates to the south. The crop statement shows that the area under cold-weather crops has here decreased, and that amongst the rain-crops, the acreage of cane, *urd* and *moth* has fallen off, whilst the area under cotton and *joár* has considerably increased. To the east of the river, owing to the canal, the improvement has been more marked and rapid. The area under wheat is somewhat less, but there is more gram, and taking both together their area has increased. The decrease in barley and barley mixed with wheat *(gojai)* is unimportant, but the increase in the best rain-crops is noteworthy. "Sugar-cane is now grown in an area 77 per cent. in excess of that of 1841; the cotton crop has increased by 58 per cent., while the reduced extent of grazing-ground, the larger number of cattle required for agriculture, and the harder work now taken from them, have necessitated the devotion to fodder crops of twice the acreage which was found sufficient thirty years ago. But now-a-days sugar-cane is no longer the crop of the parganah; and although higher rent-rates are not generally levied in this parganah for land under *munji*, or the finer rice, than those which are charged for cane land, as is the case elsewhere, *munji* is looked upon as a crop of at least equal value and importance with cane. Since the opening of the canal rice is generally grown on the best land of the estate, and alternates with cane and other valuable crops; and the introduction of *munji* into the upland portion of the parganah has no doubt seriously retarded the extension of cane cultivation." Still the millets, characteristic of poor land, occupy one-fourth of the total cultivated area.

Though the parganah has lost several good estates and received several bad ones since Mr. Thornton's settlement, a comparison of the percentages to the cultivated area of the principal crops in 1841 and in 1871 shows that there has been considerable improvement, as the following figures will testify :—

	Sugar-cane.	Cotton.	Rice.	Total kharíf.	Wheat.	Barley.	Total rabi.
1841, ...	4	2	3	54	32	1	46
1871, ...	5·7	3·3	7·5	57·2	30·3	4·2	42·8

In 1843-44 a crop statement was prepared for the parganah, and a comparison with it of the statistics of the present revision will show the progress made in 30 years. To make the influence of the canal more clear, the villages to the west of the Káli are separately entered, and as no distinction was made for the revenue-free patches in estates paying revenue to Government and the revenue-free estate of Sandaoli in 1843-44, their statistics are omitted. The following table shows the area under each crop and all the figures necessary for comparison :—

Class of estates.	*Rabi.*				*Kharif.*								
	Wheat.	Gram.	Barley.	Gojai.	Other crops.	Total.	Sugar-cane.	Cotton.	Maize.	Jowár.	Common rice.	Other crops.	Total.
Assessed estates with patches held free of revenue, 1844.	15,956	683	2,298	1,684	...	20,621	1,809	940	38	516	2,042	15,798	21,143
Ditto, 1871,...	15,062	1,573	2,165	1,052	771	20,635	2,814	1,495	361	723	1,871	20,770	28,034
Wholly revenue-free estates 1844.	1,649	97	322	11	...	2,079	192	91	...	4	227	1,474	1,988
Ditto, 1871,...	1,781	81	81	91	18	2,052	310	118	16	6	78	1,935	2,463
Thirteen estates to the west of the Káli, 1844.	3,972	120	309	150	...	4,551	385	210	...	97	554	2,933	4,179
Ditto, 1871,...	3,153	444	114	29	210	3,950	257	313	289	471	247	3,470	4,997
Fifty-nine estates to the east of the Káli, 1844.	13,633	663	2,341	1,545	...	18,149	1,616	821	38	423	2,015	14,039	18,952
Ditto, 1871,...	13,690	1,210	2,132	1,114	591	18,737	2,867	1,300	138	258	1,702	19,135	25,500

The following statement shows the detailed distribution of the soils in the cultivated area as ascertained at Mr. Cadell's revision :—

Circle.	Irrigated.				Dry.				Grand total.
	Bárah.	1*st rausli.*	2*nd rausli.*	Total.	1*st rausli.*	2*nd rausli.*	*Bhúr.*	Total.	
1st circle, ...	27	8,019	928	8,969	329	542	1,673	2,544	11,513
2nd „ ...	41	5,979	1,200	7,224	1,689	1,479	3,133	6,301	13,521
3rd „ ...	24	3,860	909	4,793	4,462	5,386	6,802	16,630	21,443
Total, ...	92	17,858	3,032	2,0982	6,480	7,407	11,608	25,495	46,477
Muáfi, ...	53	3,393	637	4,083	852	1,400	1,599	3,844	7,927
Grand total, ...	145	2,1251	3,669	2,5065	7,332	8,807	3,200	29,339	54,404
Percentage, ...	0·3	39·0	6·7	4·6	13 5	16·2	24·3	5·4	...

The nominal increase in the cultivated area during the last thirty years amounts to 6,619 acres, or 16 per cent., of which nearly 2,000 acres is due to the lapse of revenue-free holdings, 1,000 acres to errors in measurement, and

2,000 acres to decrease in recent fallow, so that only 1,500 acres, or 4 per cent., really represents newly broken-up land. The rates assumed by Mr. Cadell for his circles are as follows. : —

Circle.	Irrigated.			Dry.		
	Bárah.	*1st rausli.*	*2nd rausli.*	*1st rausli.*	*2nd rausli.*	*Bhúr.*
	Rs.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.
1st circle, ...	12	6 12	4 8	3 6	2 4	1 8
2nd „	9	5 10	3 12	3 0	1 11	1 2
3rd „	6	4 14	3 6	2 10	1 8	0 15

These rates applied to the soils of the previous table give a rental assets of Rs. 1,59,823, against Rs. 90,270 in 1841 and Rs. 1,56,467 in 1863, and a revenue at half this amount would fall at Re. 1-11-9 on the cultivated acre, against an existing revenue-rate in 1872 of Re. 1-9-0. The revenue actually assessed amounted to Rs. 82,160, and came into force from the kharíf instalments of 1873-74. It shows an increase of Rs. 21,980 over the revenue of 1841 and of Rs. 10,118 over the revenue of 1863.

Population.

The census of 1872 shows 55 inhabited sites, of which 10 had less than 200 inhabitants; 12 had between 200 and 500; 17 had between 500 and 1,000; 14 had between 1,000 and 2,000, and one had between 1,000 and 3,000. Muzaffarnagar itself is the only town in the parganah containing more than 5,000 inhabitants. The settlement records in 1871 show 64 villages, distributed amongst 72 estates, of which six villages were revenue-free and ten were uninhabited. The total population numbered 48,888 souls (21,962 females) in 1872, giving 448 to the square mile. Classified according to religion, there were 32,867 Hindús, of whom 14,644 were females; 15,993 Musalmáns, amongst whom 7,306 were females; and 28 were Christians. Distributing the Hindu population amongst the four great classes, the census shows 2,338 Brahmans, of whom 989 were females; 338 Rajpúts, including 128 females; 2,952 Baniyas (1,322 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 27,239 souls, of whom 12,205 are females. The principal Brahman sub-division found in this parganah is the Gaur, numbering 2,085 souls in 1872; Sáraswats numbered 101. The Rajpúts belong for the most part to the Tomar clan (104) and the Baniyas to the Agarwál (2,198) and Chhoti Saran (711) sub-divisions. Amongst the other castes, the most numerous are the Taga (1,271), Budhi, Kahár, Chamár (8,432), Gararíya, Juláha, Kumhár, Sonár, Lohár, Khákrob, (1,733), Ját (3,861), Banjára

(581), Gújar (466), and Saini (1,754) castes. The Musalmáns comprise 13,322 Shaikhs and 1,722 Sayyids. The statistics of the distribution of the area amongst the land-owning classes are given in the district notice. Formerly almost the entire parganah belonged to Sayyids, with a small sprinkling of Gáras, Tagas, and Gújars. At the present time the Sayyids hold only one-fourth of the entire revenue-paying area, besides large revenue-free grants, and have given place to Mahájans, Bohras, and the Marhal Nawáb of Karnál. The tenures are for the most part *pattidári*, with the shares divided into fractions of a bígha. In thirty-two of the best estates the cultivating castes are principally Játs; in nine, Gáras; in three, Sainis, and in three, Gújars, with a few Brahmans, Rajpúts and Tagas. Cultivating proprietors occupy one-fifth of the cultivated area; occupancy cultivators, two-fifths; and tenants-at-will, the remainder.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 342 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 3,103 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,455 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 5,811 in agricultural operations; 2,465 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 4,019 persons returned as labourers and 318 as of no specified occupation. Taking the total population irrespective of age or sex, the same returns give 548 as landholders, 13,495 as cultivators, and 34,845 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,936 males as able to read and write out of a total male population numbering 26,926 souls.

History.

This parganah was originally known by the name of Sarwat, from the village of that name lying about half a mile to the west of the town of Muzaffarnagar, where the remains of some extensive brick foundations are still to be seen. Shortly after his accession to the throne, Sháhjahán bestowed parganahs Khátauli and Sarwat in *jágír* on Sayyid Muzaffar Khán Khánjahán of Bihári, whose son took some lands from Sujru or Khusa Khera, and uniting them with Sarwat (about 1633 A.D.) called the new town, after his father's name, Muzaffarnagar. The parganah gradually extended by additions from Bhukarheri, Jánsath, Baghra, Charthawal, Púr Chhapár, and the neighbouring districts, until it held 44 villages inhabited by the Sayyid followers of the jágírdár, and 20 more villages were added at the settlement under Regulation IX. of 1833. In 1841-42, four villages, assessed at Rs. 3,005, were received from Deoband in the Saháranpur district, and in 1854-55 further changes took place. Immediately before the British occupation

the parganah was held on a fixed revenue by the Marhal chieftain, afterwards Nawáb of Karnál, and whose possessions here were subsequently exchanged for grants to the west of the Jumna. Of the 58 revenue-paying villages information exists regarding the assessment imposed at successive settlements on 29 villages of the old parganah of Muzaffarnagar, on 13 villages received from Bhukarheri, and on two added from Púr Chhapár. The assessment of the first 23 estates for 1208 *fasli*, or 1800-01 A.D., amounted to Rs. 18,089; for the remaining years the figures are given below:—

Number of estates.	1213 to 1215 fasli.	1216 to 1218 fasli.	1219 to 1222 fasli.	1223 to 1227 fasli.	1228 to 1232 fasli.	1233 to 1237 fasli.	1238 to 1242 fasli.	1243 to 1247 fasli.	1248 to 1268 fasli.	1270 fasli.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
23	16,525	15,774	17,874	18,494	19,267	21,437	22,636	22,458	25,971	31,560
9	3,857	3,682	3,857	4,319	4,422	5,448	5,763	5,718	6,486	8,770
12	16,679	12,090	12,035	12,765	12,765	13,294	13,614	15,016	15,466	17,890

These figures are in a few instances in the second, fourth and fifth periods conjectural, but on the whole they may be looked on as tolerably correct, though they do not profess to give the exact averages of the periods during which progressive assessments were levied. "This statement and the figures for each village combine to show," writes Mr. Cadell, "that the estates in this parganah have all along been moderately assessed. In many cases, indeed, the assessments would appear throughout to have been extremely low, even in those estates which are cultivated by old communities which held their own throughout the long period of anarchy which preceded the British occupation. Elsewhere, the most remarkable features of its fiscal history are the enormous assessments which appear to have been levied from the strong cultivating communities, and the marked rise in the assessment of estates which, before the pacification of the country, were carelessly cultivated, if tilled at all. The estates, comparatively speaking, most heavily assessed throughout the period are those immediately in the neighbourhood of Muzaffarnagar itself, and those in which the revenue has advanced least are the estates on either bank of the river which have not received canal water, or in which the opening of the canal has conferred the least benefit, or by percolation in the lower lands has caused the greatest injury. Taking the parganah, as a whole, the enhancement of the land-revenue has been gradual and moderate; and the revenue of the twenty-three estates, the history of which is known from the beginning of the century, has increased only 40 per cent. in the fifty years which elapsed between the British occupation and the construction of the Ganges canal. It is not improbable that the

revenue assessed by the Marhattas was not always very punctually levied, but there were collected, in addition to the revenue, some or all of no less than eleven distinct cesses, which appear to have had a place in the revenue system of our predecessors. Irregular demands, too, were no doubt more numerous and more important than they are now; and, above all, the country was in a state of the utmost insecurity, was in constant danger from marauders whose frequent incursions, besides inflicting other and more important injuries on the people, seriously interfered with agriculture, by keeping the population massed together in towns and large villages, instead of being scattered in a manner necessary for effective agriculture in small villages and hamlets. Since the beginning of the century, too, improved communications have accompanied increased security, population has been largely added to, and prices, which were famine prices seventy years ago, are now little, if at all, above the average. Independently, therefore, of the construction of the canal, the assets of the parganah might have been expected to show a large increase, which successive reductions of the proportion of the rental taken by the State could not prevent Government from sharing."

Changes in proprietary rights.

"Transfers, comprising 27 per cent. of the total area, took place between 1841 and 1860 (18,356 acres), and from 1862 to 1871 eight per cent. more changed hands (5,481 acres). That this was not due to over-assessment is shown by the prices given. In the case of private transfers of portions of estates during the first period the prices fetched amounted to 25 times the land-revenue, and in the latter period 15 times, or Rs. 11-3-0 and Rs. 20-6-3 per acre respectively. In the case of transfers by public sale, the proportion of the sum realized to the annual Government demand increased slightly in the second period, whilst the average price per acre rose from Rs. 7-7-9 to Rs. 12-9-11 per acre, or by over 67 per cent. Even with reference to the land which still remains to the Sayyids in this parganah, the changes have been great. The poorer owners have given way, and land, even among Sayyids, is accumulating in a few hands. The remaining proprietors, besides the communities noticed above, are of various castes, but their holdings are small and unimportant. The fact that so many of the poorer proprietors have ceased to hold land in the parganah has done a good deal to facilitate the work of assessment. No consideration, however excessive in assessment, can save Sayyid owners from the inevitable result of reckless extravagance, but assessments are often kept down when the family which owns the land is, although from causes altogether distinct from the incidence of the Government demand, on the brink of ruin. Now, however, nearly all the best estates are owned by capitalists who have been fortunate in their investments, and whose incomes have been increased without

[1] II Rev. Rep. (N. S.), 10.

effort on their part; while the poorer Sayyids hold on in townships which, owing to want of water and poverty of soil, require, independently of the circumstances of the owners, most cautious treatment. The cultivating brotherhoods, again, have contrived to preserve their proprietary rights only in the worst portion of the parganah, so that altogether the proprietors who require special consideration own, almost without exception, the land which on account of its natural quality, or by reason of increasing deterioration, requires the most cautious and lenient treatment."

Causes of decrease in population.

The population in 1853 was 45,642 ; in 1865 was 49,518, and the figures for 1872 have already been given. These show a considerable increase between 1853 and 1865, and a decrease between 1865 and 1872. The statistics, however, of Jánsath and of other parganahs go to show that there is not necessarily any connection between canal-irrigation and a decreasing population, and Mr. Cadell's examination of the statistics for this parganah confirms this view, for amid all the conflicting ideas to which the figures for this parganah might possibly give rise, there is one indisputable fact that, with one trifling exception (Sikhara), the population has fallen off in every village in this parganah which is not watered from the canal. In the nine villages to the west of the Káli, population decreased by over one thousand in the seven years 1865-72, but though they did not escape the epidemic fever which has raged in the district since 1867, the diminution in numbers is due more to drought than to disease. A similar falling off may be noticed in almost every village in which the area under cultivation is very seriously diminished in a year of drought. In such seasons owners and occupancy tenants cling to the land, but less permanent residents emigrate to tracts where irrigation is more plentiful and population is insufficient: and such tracts lie almost entirely beyond the boundary of this parganah. To the east of the Káli, population has slightly increased, and here, on the whole, villages with defective drainage have suffered, or at least the population has not substantially increased. " But there are others of this class in which the population has increased in a marked manner. Plentiful irrigation, where not combined with specially defective drainage, does not, it is clear, retard the increase of population even in estates which, occupied by strong cultivating communities, can hold out the prospect of employment, but not of land, to new-comers. The most rapid increase of all has taken place in the sparsely-populated estates, in which canal-irrigation and high cultivation are making more or less rapid progress, and of late years the increase has, it would seem, taken place within the parganah, and is not due to immigration from without. The falling off in the agricultural population since 1852 is probably entirely due to a difference in the classification, day-labourers having been, in

1865 and 1872, classed as non-agricultural; and the statistics of population, as far as they are available, show that during the nineteen years that have passed since 1852 a steady decrease in the population of the dry tract to the west of the Káli river, and a steady increase in the population of the canal-irrigated tract to the east of the river—an increase, however, which has been very materially checked by the very severe fever epidemic which was so fatal in this parganah in 1867 and the two subsequent years."

PÚR CHHAPÁR, a parganah in the Muzaffarnagar tahsíl of the Muzaffarnagar district, is bounded on the north by the Saháranpur district, on the south-west and south by parganahs Muzaffarnagar and Bhukarheri, and on the east by parganah Gordhanpur. According to the census of 1872, this parganah had, then, a total area of 93 square miles and 544 acres, of which 66 square miles and 557 acres were under cultivation. The area assessed to Government revenue during the same year was 89 square miles and 543 acres, of which 63 square miles and 249 acres were cultivated, 10 square miles and 486 acres were culturable, and 15 square miles and 448 acres were barren.

General appearance.

Parganah Púr Chhapár lies in the north-east of the district and is the most northerly of the parganahs of the Ganges canal tract. If, as has been recommended, the six estates situated in the alluvial land lying between the Soláni and the Ganges be transferred to the Gordhanpur parganah, the Soláni river will form the eastern boundary of the parganah. To the west of the Soláni runs the Ganges canal, and from Godhna on the canal, a belt of sandy hillocks runs south-west and bifurcating at Simarthi, which they completely surround, and thence running southwards, enter the Bhukarheri and Muzaffarnagar parganahs. Occasionally these lines of sand unite to form a ridge, but, as a rule, they consist of a series of hillocks varying in size and shape with the force and direction of the wind. Amidst them, hollows are to be found where water lodges and is retained, and which add much to the fertility of this sandy tract. From the main chain of hillocks, branches spread out in every direction and gradually fade into the ordinary level of the country. To the east of these ridges lies the extensive sandy plain extending northwards from Bhukarheri. This sandy tract commences to the north in the Saháranpur district, and can be traced southwards through Meerut, Bulandshahr, and Aligarh into the Eta district.[1] Although the parganah compares favourably with the parganahs adjoining it on the south, in the proportion of land under the plough, it is very distinctly inferior in natural fertility, and though it has excellent facilities for irrigation, owing to the prevalence of sand, the proportion of irrigation to cultivation is less

[1] The chief authority for this notice is Mr. Cadell's M.S. report.

than usual. Indeed, there are few really good villages in the parganah, and 64·75 per cent. of the cultivated area and a still larger proportion of the total area is either sand or sandy loam. Before the introduction of the canal, water was found at a depth of 60 feet in the west and of 100 feet in the eastern portion of the parganah, so that the cost of wells (Rs. 1,500 to Rs. 3,000) and the cost of drawing water precluded irrigation except in the case of garden lands, and even then only to a small extent. The absence of water for drinking purposes has interfered, though to a less extent than in Bhukarheri, with the cultivation of the land overlooking the Ganges *khádir*.

The Soláni villages.

Six villages in the Soláni khálir to the east of that river which belonged to this parganah have been added to the swamp affected villages of Gordhanpur and are held under direct management. On either side of the canal the lands in the *khádirs* of the rivers have become seriously deteriorated. On the West Káli river the injury, though great, is limited in extent, but along the Soláni the results of percolation have been more destructive. From north to south all the fields, except the very highest and sandiest below the uplands, have been injured, and cultivation has fallen from 1,470 acres in 1841 to 836 acres in 1871. The loss has not ended here, for, in the area now under cultivation, the best crops have almost disappeared. Cane is grown only in one village and cotton and rice have smaller areas and are more uncertain, whilst the old rice-lands have given place to a reed-grown swamp. The water-shed of the parganah is the high bank overlooking the Ganges valley, along which the canal runs. The general slope of the country is towards the south and east, but the drainage is interrupted by natural obstacles in the shape of sand-ridges and by artificial hindrances in the shape of rajbahas, and the sand absorbs so much moisture that very little of the rain-fall in the uplands escape from the parganah. The water-level has now risen to 20 feet from the surface in the west and lower portion of the parganah and to from 50 to 60 feet from the surface in the high land along the water-shed. In many respects the parganah is very similar to Bhukarheri, but still somewhat inferior. It has more sand, less irrigation, a smaller population to the square mile, and on the whole a lower standard of cultivation. On the other hand, there is the same large percentage of sand and a general similarity in soil and cultivation. In the castes of cultivators there is a resemblance, though this parganah has more Tagas and fewer Játs and the Gújars are better. The absence, too, of a resident cultivating community along the high bank overlooking the Ganges valley is less felt than in Bhukarheri.

Fiscal history.

The settlement under Regulation IX. of 1833 was made by Mr. E. Thornton in 1840-41 and expired in 1861. The revision was made by Mr. S. N. Martin in 1862-63, but this was cancelled, and Mr. A. Cadell was directed to revise the assessments made by

Mr. Martin. The following statement shows the statistics of each period according to Mr. Cadell:—

Parganah.	Total area.	Cultivated.			Culturable.	Revenue-free.	Barren.	Revenue.	Rate per cultivated acre.
		Wet.	Dry.	Total.					
1841.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Uplands, ...	55,026	53	37,069	37,122	8,504	2,604	6,796	55,543	1 7 11
Lowlands, ...	3,334	...	636	636	935	...	1,763	604	0 15 2
Total, ...	58,360	53	37,705	37,758	9,439	2,604	8,559	56,147	1 7 10
1863.									
Uplands, ...	57,289	25,852	14,606	40,458	5,590	2,573	8,668	59,250	1 7 5
Lowlands, ...	3,010	5	233	238	1,374	...	1,398	80	0 5 4
Total, ...	60,299	25,857	14,839	40,696	6,964	2,573	10,066	59,330	1 7 4
1872.									
Uplands proper, ...	52,582	20,011	20,989	41,000	2,418	2,595	6,574	...	...
Lowlands, ...	4,165	14	1,135	1,149	1,168	...	1,848	...	...
Total, ...	56,747	20,025	22,124	42,149	3,581	2,595	8,422	69,550	1 10 5
Lowlands of Soláni, ...	3,010	5	233	238	1,374	...	1,398	250	1 0 3
Grand Total, ...	59,757	20,030	22,357	42,387	4,955	2,595	9,820	69,800	1 10 4

The upland figures for 1841 and 1863 exclude the area of the six swamp-affected estates in the Soláni valley and include the area of the upland portion of the parganah, together with the lowlands of the nine villages which stretch into the Ganges valley and of the two which are bounded by the West Káli river. This lowland area is distinguished from the area of the upland proper in the figures for 1872. The returns show that 92 per cent. of the assessable area is under the plough, 0·5 per cent. under groves, 6 per cent. is culturable waste, and 1·5 per cent. is recent fallow. Mr. Martin, in his report, remarks that he could not recommend any increase to the land-revenue except in villages where the sandy area had decreased owing to better cultivation, or where the hollows in the sandy ridges had increased so as to contain more water and render the land more fertile. Again in 1865 he writes:—"I have now had two years' experience of the settlement of this parganah, and I can confidently say it is neither too light nor severe." Notwithstanding this strong expression of opinion a revision was ordered. Mr. Cadell's assessment extended to 55 villages forming 57 mahâls or estates, of which 8 were placed in the first or best class, 27 in the second, and 22 in the third. Six of the first-class estates lie in the rich tract through which the metalled road to Pûr runs, and to the west of the main sand ridge which intersects the parganah. This tract is

separated from the ridge by a belt of second-class villages, but two of its villages, Khái Khera and Basera, extend into the sandy plain on the east and considerably increase the average of sand in the circle. The second class is inferior in its crops, soils and cultivators, and in the third class the cultivated area comprises 82·5 per cent of sand. The following statement gives the soil areas of the cultivated area of the parganah in 1872 :—Taking the parganah as a whole there is almost equal quantities of loam, sandy loam and sand. The first is completely irrigated and irrigation covers about one-half of the second.

In the matter of crops, the *kharíf* crops cover 57·25 per cent. of the total cultivated area, and amongst them cane occupies 5·2 per cent.; cotton, 4·3; *munji* or fine rice, 7·2; *dhán* or coarse rice, 2·3; *urd*, 7·7, and *bájra*, 15·3 per cent. In the *rabi*, wheat covers 25·3 per cent. of the total area; barley, 8·3 per cent.; and *gojai* or mixed wheat and barley, 7·2 per cent., exclusive of *dofasli* or extra cultivation. *Munji* occupies 15 per cent. of the irrigated area, and cane only 10 per cent. In 1841 the prevalence of sand and the absence of any means of artificial irrigation were the characteristics of the tract, but since then the progress has been immense—from 53 acres in 1841 to 20,000 acres in 1871, or including irrigation in revenue-free estates to 21,180 acres, of which 21,009 acres were irrigated from the canal. In 1868-69 the canal-irrigated area rose to 24,852 acres, but in 1872-73 it fell to 11,481 acres. 1868-69 was a year of remarkable drought and 1872-73 was a year of more than average rainfall, so that a mean between the two years, or about 15,000 acres, will show the average area irrigated, and adding one-third to this, the irrigable area. The parganah was prosperous under the old settlements, and though the transfers amounted to 16 per cent. of the total area, they were chiefly due to the pressure of the assessment in and the misfortunes of a very few villages, and have been principally from one class to members of the same class. Of 1,499 acres transferred by Tagas, only 334 acres have gone to other castes, and the largest and most heavily assessed estates in the parganah are still, as of old, almost entirely in the hands of the Taga brotherhoods, who in one capacity or another have all along had the management of them. Even Gújars have done well, and the only communities that have lost a great portion of their lands are the Játs of Basera and Tughlakpur. The Játs, too, since the introduction of the canal, have commenced to recover their ancient position. The rent-rates assumed by Mr. Cadell were as follows:—

Circle.	Irrigated.			Dry.		
	Bárah.	1st Rausli.	2nd Rausli.	1st Rausli.	2nd Rausli.	Bhúr.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p	Rs. a. p	Rs. a. p.
1st circle, ...	12 0 0	6 0 0	4 2 0	3 3 0	2 4 0	1 5 0
2nd „ ...	12 0 0	5 4 0	3 12 0	3 0 0	1 14 0	1 2 0
3rd „ ...	6 0 0	4 5 0	3 3 0	2 10 0	1 8 0	1 0 6
General average, ...	11 7 3¼	5 8 5½	3 12 3¼	2 14 8¾	1 14 1¼	1 2 7¾

These rent-rates gave a general average for the whole parganah of Rs. 11-7-3¼ per acre for *bárah* or garden land; Rs. 5-8-5½ for wet loam or first-class *rausli*; Rs. 2-14-8¾ for dry loam; Rs. 3-12-3¼ for wet sandy loam or second-class *rausli*; Re. 1-14-1¼ for dry sandy loam, and Re. 1-2-7¾ for *bhúr* or sand. These were generally the rates assumed for Bhukarheri. The application of these rates to the soil areas gave a rental assets of Rs. 1,31,766, or Rs. 12,872 in excess of the rental assumed in 1863 and Rs. 46,375 in excess of the assets assumed in 1841. The increase to the assets, therefore, assumed by the new rent-rates since 1841 is one of more than 52 per cent., a degree of progress which seems to be in no respect excessive when the improvement of cultivation, the rise in prices, and, above all, the enormous increase of irrigation are considered. The assessment actually made in the upland amounts to Rs. 69,550, which came into force from 1873-74, and gives an increase of Rs. 10,948 over the revenue of 1841 and of Rs. 10,300 over the revenue of 1863. The revenue of the six lowland villages has been raised from Rs. 80 to Rs. 250 in 1281 *fasli* (1873-74 A.D.) The extension of irrigation to nearly the whole of the naturally good land leaves any further improvement to be looked for in the careful cultivation of the poorer land, which requires a larger population than the existing one to give the labour and manure necessary to bring it to the state in which irrigation becomes remunerative. The irrigation of sand makes in ordinary years but little difference in the outturn, and does not repay the cultivator, who can only resort to it in seasons of drought, when the rise in price doubles the value of the crop and straw, while the important item of water-rate remains unchanged. During every season of drought, therefore, an important area is watered, which is not again irrigated until the exceptional conditions are renewed. The culturable waste, too, leaves little margin for extension, and the improvement in this direction must continue, as it has been, in the direction of substituting the better for the inferior crops.

Population.

According to the census of 1872, parganah Púr Chhapár contained 44 inhabited villages, of which nine had less than 200 inhabitants; 22 had between 200 and 500; five had between 500 and 1,000; four had between 1,000 and 2,000; two had between 2,000 and 3,000, and two had between 3,000 and 5,000. The settlement records show that, in 1863, there were 62 estates on the register and 60 villages, of which 16 were uninhabited. The total population in 1872 numbered 33,026 souls (14,969 females), giving 351 to the square mile. Classified according to religion, there were 23,717 Hindús, of whom 10,600 were females and 9,309 Musalmáns, amongst whom 4,369 were females. Distributing the Hindu population amongst the four great classes, the census shows 2,446 Brahmans, of whom 1,099 were females; 76 Rajpúts, including 30 females; 1,453 Baniyas

(651 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 19,742 souls, of whom 8,850 are females. The principal Brahman sub-division found in this parganah is the Gaur, numbering 1,432 souls in 1872. The Baniyas belong to the great Agarwál (1,432) sub-division, and amongst the other castes the most numerous are the Taga (2,620), Kahár, Chamár (6,201), Gararíya, Juláha, Kumhár, Son'r, Jogi, Máli, Khákrob, Ját (1,592), Banjára and Gújar (2,124). The principal landholder in the parganah is the money-lender of Chhapár, whose ancestors were formerly in the service of the Landhaura Raja. The descendants of Rámdayál, the Gújar Raja, have now only two estates in the north and a portion of Basera. The Shaikhs of Rajupur still retain one village and a portion of another, which is, bit by bit, falling into the hands of the Ját cultivators. The Shaikhs of Púr and the Tagas and Játs fairly hold their own, and their losses to the money-lenders occurred during the early days of British rule, before the rights of village communities had been formally acknowledged. The Shaikhs of Púr, however, still maintain the evil reputation which they earned in former days when the uncertain produce of their land gave some excuse for dilatory payments. The predominant classes amongst the agriculturists are Játs, Tagas, Brahmans, and Sonárs. The Tagas and Játs are found in groups of villages, all claiming descent from a common ancestor, and these are also the best villages.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 343 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,582 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 603 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 4,894 in agricultual operations; 1,624 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 2,224 persons returned as labourers and 201 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 1,310 as landholders, 11,562 as cultivators, and 20,154 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 575 males as able to read and write out of a total male population numbering 18,057 souls.

Púr Chhapár is one of the old Akbari parganahs and formerly bore the name of Chhapár-Khuda from the village of Khuda, which is still in existence in the west of the parganah. Similarly, under the Hindús, Shikárpur bore the name of Khudi from the village of the same name still in existence. Many

History.

years ago, however, a celebrated person named Kázi Nizám came here and settled at Púr, and since then the name of Púr Chhapár, or Kázi-ke-Púr, has become common. The kánúngo, according to Mr. Martin, professes to trace a line of Hindu Rajas here for 4,181 years, and the Musalmán occupation dates from the twelfth century. The present parganah is made up of 27 villages belonging to the old parganah of Púr; 25 from the absorbed parganah of Núrnagar; 4 from Bhukarheri; one from Deoband, two from Manglaur in the Sahá·anpur district, and one from Jauli. In 1840-41 two villages were transferred from Púr to Deoband and three to Manglaur. Púr lies to the north of the tract occupied by the Sayyids in the seventeenth century, and does not appear to have been appropriated by any of the powerful residents of the district until it was obtained by the Jánsath Sayyids when they rose to supreme power in the reign of Farrukhsiyar. After the ruin of its Sayyid masters this tract was included in the Báwani mahál, and eventually fell into the hands of Raja Rámdayál of Landhaura, in whose possession it remained until his death in 1813. The *mukarari* of the Raja then lapsed, and Mr. Chamberlain made a settlement with the village communities themselves at a more than average rate. At the next settlement, the high demand seems to have been maintained, and this parganah, which had the good fortune to escape, as a whole, "the scourge of public sales, came under the ruinous system of farm." The oppression, however, of the principal farmer, Shaikh Kalan (see Saháranpur district, Gazetteer, II., p. 212), led to the cancelment of the farm, and the village proprietary bodies were once more admitted to engagements.

Fiscal arrangements.

Here, even more than elsewhere, the townships owned by cultivating brotherhoods were from the beginning highly assessed, and the demand seems to have been specially high in those estates in which the rights of the new zamíndárs were least decided. In not a few of the estates comprising the old *mukarari* there were no long established communities. The Sayyids had become owners, the Gújars had dispossessed the Sayyids, and there were no owners left. In one estate, the instructions to settle with the residents were so faithfully carried out that even the Chamárs received their shares; in another, a Ját colony which can even now count no more than five generations since the original immigrants settled round the Sayyid fort, received a splendid property, and people who had no rights were thought to be left well enough off with the small percentage left them by assessments, which even now that the value of the land has been nearly doubled cannot under the present rules be sensibly enhanced. The successive assessments up to 1841 remained at practically the same amount except in the two villages of Púr and Purai, and excluding these and the resumed revenue-free estates the total increase since 1813 has hardly amounted

to two thousand rupees, still the original heavy assessment has not in itself been felt as intolerably severe, and with the introduction of the canal the villages began to recover themselves rapidly. One result of the high incidence of the demand deserves notice, and that is the improvement that has taken place in the condition of the tenantry. In a dry tract, assessed to close upon the average assets, the landholder must adopt a conciliatory policy towards his tenants and use every means to induce them to aid him in bearing the burden of taxation. In many villages tenants are found holding at rates little above the revenue demand, and cases occur where the whole management of the estate and the proprietary rights have fallen into the hands of a few pushing members of the brotherhood, the remainder, from fear of responsibility, having allowed themselves to drift into the position of mere tenants holding at specially favourable rates. In nearly every respect, the history of the parganah, in recent times, has been one of gradually increasing prosperity. There has been comparatively fewer transfers of proprietary right and less strife and litigation than elsewhere between landlord and tenant, and it only wants a rapidly increasing population, which is essential to agricultural prosperity, to be in the enjoyment of every advantage that a tract naturally deficient in good land and manure can possess. The district notice gives the distribution of the area amongst cultivators and proprietors and their castes.

PÚR, a village in parganah Púr Chhapár of the Muzaffarnagar district, also known as Kázi-ke-Púr, is distant 16¾ miles from the civil station. The population in 1872 numbered 4,356 souls. Púr contains some good brick-built houses and a good *masjid*. The inhabitants are chiefly Shaikhs. An old well situated in the village contained 36 feet in depth of water at 20 feet from the surface in 1868; before the opening of the canal there was only 12 feet of water in the same well at a depth of 44 feet from the surface. Fever has been rife here for some years. The centre of the village site is somewhat raised, but still there are large excavations filled with stagnant water around, and no arrangements have been made for drainage. Act XX. of 1856 (the Chaukidári Act) is in force, and supported a village police numbering 15 men of all ranks in 1872 at an annual cost of Rs. 864. The total income during 1872-73 amounted to Rs. 2,138, giving an incidence of Re. 0-5-1 per head of the population and Re. 1-9-8 per house. The number of houses assessed was 865 and the expenditure was Rs. 1,532. It has a good encamping-ground, and supplies and water are plentiful. There is a second-class police-station, a post-office and a school here. Púr lies on the route from Meerut to Rúrki, and is distant 15⅜ miles from the latter town. The road from Muzaffarnagar to Púr is described under the former town. From Púr to Rúrki the road is metalled and bridged and passes through a fairly cultivated country. The Ganges canal is crossed by a bridge at 7 miles, near Manglaur. Púr in Jhánjhána is 25 miles from Muzaffarnagar.

RAJPUR KALAN, a village in parganah Bhúma of the Muzaffarnagar district, is distant 22 miles from the civil station. The population in 1865 numbered 1,500 souls, and in 1872 there were 1,418 inhabitants, principally Játs. The houses are built of mud, much crowded together, and the lanes are narrow, tortuous, and uneven. Numerous excavations exist on all sides, and these exhibit much mud in the hot weather. The water in the wells is 17 feet from the surface. The country around is sandy, but is irrigated from a distributary, running close to the site.

SAMBALHERA, a village in parganah Bhúma Sambalhera of the Muzaffarnagar district, is distant 18 miles from the civil station. The population in 1872 numbered 2,018 souls. The houses are scattered over the site, surrounding the one good brick-built house of the Musalmán proprietor. The country around is sandy, and there are low sand-hills close by. In the adjoining village of Mahmúdpur is a brick fort with high corner towers. The drainage and cleanliness of this village appear to be neglected. There is little irrigation, and the water in the wells stood at 30 feet from the surface in March, 1868. The Sayyids of Sambalhera belong to the Chhatrauri clan of the Bárha Sayyids, for an account of whom see the district notice under "History."

SHÁHPUR, a village in parganah Shikárpur of the Muzaffarnagar district, is distant 13 miles from the civil station on the Budhána road. The population in 1872 numbered 3,371 souls. There is a second-class police-station and post-office here. The Chaukidári Act (XX. of 1856) is in force in Sháhpur and supports a village police numbering nine men at a cost of Rs. 528 a year. The total income from all sources in 1872-73 was Rs. 1,061, giving an incidence of Re. 0-4-4 per head of the population and Rs. 3-13-7 per house. During the same year the number of houses assessed was 256 and the expenditure was Rs. 1,103.

SHÁMLI, a town in parganah Shámli of the Muzaffarnagar district, is distant 24 miles from Muzaffarnagar. Shámli, in 1847, had a population numbering 8,447 souls, in 1853 the numbers were 11,816, and in 1865 they were 9,728. In 1872 there were 9,177 inhabitants, of whom 7,158 were Hindús (3,292 females) and 2,019 were Musalmáns (848 females). Shámli is situated in lat. 29°-26′-45″ and long. 77°-21′-10″. Francklin[1] writing in the last century, describes Shámli as a town two miles in circumference, which "contains many handsome houses both of brick and stone. The streets intersect each other at right angles and have separate gates at their entrances, which at night are shut for the security of the inhabitants. At Shámli is a large bazar and a mint where money used formerly to be coined. But the trade of this place, like many others in the Duáb, is now much on the decline, and with the exception of a few coarse cloths, the manufactures are at a stand. In its present state, the

The site.

[1] Life of George Thomas, 93.

villages attached to the parganah of Shámli yield a revenue of about Rs. 50,000, though in the flourishing times of the empire it was far more considerable." There are now a good number of brick-built houses, but the only good street is the bazar, which has a fine row of shops on either side. The site is very low and even bears the character of a depression in the general level of the surrounding country. The consequence of this is that water in the wells in some places is as low as four feet from the surface and in others ten feet. In the rains, water in some places stands almost at the surface and is unfit for drinking. The soil is mostly tenacious with a good deal of clay in parts. *Chari* or fodder is the principal rain-crop, and in the spring wheat is chiefly grown. There are numerous clumps of mango trees to the north and north-west of the town. The eastern Jumna canal runs close to the town on the west, and there is a canal channel on the east. The town of Shámli is remarkably filthy, even in a district which boasts of few clean towns. On the west and south there are a series of large shallow water-holes connected by a drainage cut and containing a deep deposit of brown soft mud which is used as a manure. On the north and east is the Ganda nála, which has been continued by cutting to the Krishni or Karsuni nála about a mile to the south of the town. This, however, is of little use as there is not sufficient fall to create a current and the cutting is usually choked with rank vegetation, whilst the stagnant water is further defiled by the house drainage from the east. There is much sickness here and a bad smell proceeds from the mud when exposed to the sun, and from the numerous refuse heaps to be found in every direction. Dr. Cutcliffe, writing in 1868, says of the inhabitants: —"The general, and almost universal, appearance of the people of Shámli was very striking. They looked thin, ill, pallid, cadaverous, listless and depressed. There seemed to be a stillness and a sickly quietude over the people, and the busy hum of voices was absent from the bazars. They say that sickness from cholera and fever has been very great and general, and that about 800 people died during the year. They say that every soul in the town suffered from malarious fever, which was in some cases intermittent and in others remittent. The latter form was the most fatal. Diarrhœa was a frequent complication." A scheme, however, for deepening and enlarging the bed of the nála above mentioned has now (1875) been taken in hand. It is roughly estimated to cost two lakhs of rupees. Meanwhile the lower part of the bed will be deepened at once, so as to provide an outfall for the water which lodges in the town of Shámli, and the municipality will co-operate by digging channels within its own limits to carry the water into the deepened stream.

Municipality.

Shámli possesses a fair trade with the Panjáb and a considerable quantity of sugar is exported in exchange for salt. It has a first-class police-station, a post-office, and a tahsíl. The affairs of the municipality are managed by a committee of twelve members, of whom four

are official and the remainder are elected by the tax-payers. The incidence of the octroi in 1873-74 amounted to Re. 1-2-3 per head of the population for nine months only; in 1874-75 the incidence was Re. 1-2-9 for the whole year. The following statements show the income and expenditure and the imports and consumption per head for nine months of 1873-74 and the entire year 1874-75 :—

Receipts.	1873-74.	1874-75.	Expenditure.	1873-74.	1874-75.
	Rs.	Rs.		Rs.	Rs.
Opening balance, ...	1,024	2,882	Collections, ...	1,056	1,016
Class I.—Food and drink, ...	7,819	8,425	Head-office, ...	190	276
„ II.—Animals for slaughter.	38	36	Supervision, ...	79	120
			Original works, ...	1,536	3,789
„ III.—Fuel, &c., ...	406	506	Repairs, ...	507	959
„ IV.—Building materials,	233	222	Police, ...	1,588	1,830
„ V.—Drugs, spices, ...	351	623	Education, ...	58	124
„ VI.—Tobacco, ...	35	120	Charitable grants, ...	70	386
„ VII.—Textile fabrics, ...	662	825	Conservancy, ...	638	1,074
Metals, ...	1,083	305	Miscellaneous,... ...	3,313	3,029
Total octroi, ...	10,627	11,062			
Fines, ...	32	211			
Pounds, ...	114	177			
Extraordinary, ...	112	32			
Miscellaneous, ...	8	22			
Total, ...	11,917	14,386	Total, ...	9,035	12,603

Statement showing import of taxable articles and consumption per head in Shámli.

Articles.	Net imports in				Consumption per head in			
	1873-74. (nine months.)		1874-75.		1873-74 (nine months.)		1874-75.	
	Quantity.	Value.	Quantity.	Value	Quantity.	Value.	Quantity.	Value.
	Mds.	Rs.	Mds.	Rs.	Mds. s. c.	Rs. a. p.	Mds. s. c.	Rs. a. p.
Grain, ...	55,395	...	86,017	...	5 39 12	...	9 9 4	...
Sugar refined, ...	3,983	...	...	...	0 17 2	...	...	...
Ditto unrefined, ...	21,627	...	18,070	...	2 13 1	...	1 37 6	...
Ghi, ...	913	...	1,280	...	0 3 14	...	0 5 8	...
Other articles of food,	4,554	4,470	8,749	4,572	besides 2,003 loads.		besides 3,907 loads.	
Animals for slaughter,	241No	...	462No.	...	...	...	$\frac{1}{10}$ head	...
Oil and oil-seeds, ...	2,166	...	3,644	...	0 9 5	...	0 15 11	...
Fuel, &c., ...	917	2,060	885	3,699	0 3 15	0 3 6	0 3 13	0 6 4
Building materials,...	...	11,372	...	12,694	...	1 3 6	...	1 5 10
Drugs and spices, ...	...	16,009	...	30,952	...	1 11 6	...	3 5 3
Tobacco, ...	189	...	850	...	0 0 13	...	0 3 10	...
European and native cloth.	...	40,740	...	49,882	...	4 1 10	...	5 0 4
Native shoes, ...	...	2,480	...	3,236	...	0 4 3	...	0 5 6
Metals, ...	4,167	191	1,384	...	0 17 14	0 0 4	0 5 12	...

Routes.

Shámli lies on the route from Dehli to Saháranpur between Ailam and Jalálabad, and is distant fromthe former 12 miles and from the latter town 13½ miles. The road throughout is earthen, raised and bridged; from Ailam it passes close to the left bank of the eastern Jumna canal, through the lands of Kándhla, Fazilpur, Kandrauli and Latui, all highly cultivated villages, and is occasionally heavy from swamps during the rains. From Shámli to Jalálabad it passes through Banat, a fair sized village; Sikka; Heradh at 6 miles; Harhar and the decayed Musalmán town of Thána Bhawan at 11 miles. Shámli is also on the route from Meerut to Karnál, and is distant 14½ miles from Jaula and 13 miles from Bidauli. The road is raised, earthen and indifferent in the rains, when it is often swamped. From Jaula it passes through the lands of Sarái, Lúi, Phugána, Khera Mastán and Hasanpur; it crosses the Krishni by a bridge at Jhál (9½ miles) and passes through Tájpur and Gágharpur to Shámli. Hence to Bidauli the road is fairly good, though indifferent in places for the first two miles: it crosses the eastern Jumna canal by a bridge close to Shámli, passes Taparána at 3¼ miles; Jhanjhána, a fair sized town, at 6 miles; crosses the Kátha at 7 miles (during the rains this stream is formidable and is crossed on a platform); the Kirtu núla at 12 miles (also crossed by a platform in the rains) and Jalálpur at 12¼ miles.

History.

The original name of Shámli was Muhammadpur Zanárdár. It formed a portion of the *jágír* granted by Jahángír to his physician Hakím Mukarrab Khán. A follower of the Hakím built a market in the village which he called after his own name (Shám). The jágír was resumed in the reign of Bahádur Shah, but the name Shámli, or as pedants would have it Syámli, has been retained to the present day. In 1794, Shámli was the residence of the Marhatta commandant, who being supposed to be in league with the Sikhs and to encourage their incursions, George Thomas was sent against him by Lakwa Dáda, the Marhatta governor. An action took place in which the commandant, after a most gallant defence, was obliged to retreat into the town. Thomas, the same evening, stormed the town and captured it, when the commandant and his principal adherents were cut to pieces, and Thomas, after appointing a new civil governor, was in time to take part in the siege of Lakhnauti. In 1804 the first battalion of the 14th N. I. and a local battalion under Colonel Burn were sent to protect the district against the Marhattas.[1] Colonel Burn marched up the Duáb, but was overtaken by Jaswant Rao near Kándhla, and at Shámli his little force was completely surrounded by an overwhelming host of Marhattas (29th and 30th October). Retreating to a small fort close under the walls of the town, he there bravely stood at bay, in a position apparently desperate, for the

1804.

[1] Prinsep's Amír Khán page 225.

people of Shámli joined the enemy and intercepted his supplies. He must in the end have surrendered, had not the Commander-in-Chief's advance relieved him on the 3rd November. The Marhattas disappeared southward without striking another blow, and Colonel Burn took part in their pursuit up and down the Duáb as far as Meerut.

The mutiny.

During the early part of the disturbances of 1857 Shámli was held by Ibráhím Khán, the tahsíldár, who succeeded in opening up the communications between Meerut and Karnál and kept his division in excellent order until about the end of August, 1857. He then discovered that Mohar Singh, the principal landholder of the neighbourhood, who had hitherto assisted in keeping order, was in traitorous correspondence with Dehli, and called for assistance.[1] Troops were sent to Shámli with Mr. Grant in charge, and remained there for some time. On the 2nd September they attempted to beat up the quarters of Khairáti Khán of Parasauli in the Kándhla parganah, but were repulsed. This was the signal for a general rising of the whole of the neighbouring parganahs: Jaula and Parasauli made common cause, and were reinforced by detachments from Bijraul and Baraut in the Meerut district, the former under Sajja and Bakta, sons of the notorious Sáh Mal. The fort of Burhána was taken and garrisoned by the insurgents and the communication between Meerut and Karnál *viâ* Jaula was cut off. The Magistrate (Mr. R. M. Edwards) repaired to Shámli with his entire available force, but so conflicting was the information received by him that little could be done. He no sooner heard of a party of rebels being collected in a village and had arranged to go and disperse them than other intelligence was brought that there was a still larger gathering in another direction. He writes:—"The truth I believe to have been that there were considerable bodies of men collected in several villages whose intention was to concentrate their force at a stated time, at one common rendezvous, and from there assume the offensive." Mr. Edwards took advantage of his presence at Shámli to punish the turbulent inhabitants of Harhar, Heradh and Sikka, villages lying along the Jalálabad road, which had taken to plundering. News, too, arrived of a rising in Thána Bhawan on the same road, but considering the dispersion of the insurgents at Jaula and the recovery of Budhána of the first importance, he proceeded there with all his available force on the 14th of September. On the same day Shámli was attacked by the rebels from Thána Bhawan headed by the Shaikhzádah Kázi, Mahbúb Ali Khán and his nephew Ináyat Ali Khán. The garrison consisted of the tahsíldár (Ibráhím Khán); Bakhtáwar Singh, tahsíldár of Thána Bhawan; 20 troopers; 28 jail sepoys and 100 new levies, The tahsíl enclosure was a place of considerable strength, and both the native

[1] The petitions of this man to the ex-emperor were found subsequently in the Dehli palace and his father played the same part in 1804.

officers expressed their confidence in being able to withstand any attack. Ibráhím Khán fought gallantly, but the place was taken by assault, and one hundred and thirteen men were killed in the defence. "The ferocity of the Muhammadans, especially against Government servants, was shown by their slaughtering all who, on the place being taken by assault, fled for refuge into the mosque and temple, which have always, hitherto, been regarded as sanctuaries. They were there to a man cut to pieces; even little children were slaughtered. The inner walls of both the mosque and temple, which are within the tahsíl enclosure, were crimsoned with blood." The troopers of the garrison behaved splendidly. "These men, one and all, did their duty nobly, and in doing so submitted to every species of insult from those of their own faith amongst the assailants. The Musalmán flag was waved before them, and when others deserted and found safety underneath its folds, they shot the standard-bearer dead." Of ten men of the 1st Panjab cavalry nine were killed. It was not till after the fall of Thána Bhawan that Shámli was reoccupied, and from that time no further disturbances of importance took place.

SHÁMLI, a parganah in the tahsíl of the same name in the Muzaffarnagar district, is bounded on the north by parganahs Jhanjhána and Thána Bhawan; on the west by parganah Kairána; on the east and south-east by parganahs Baghra and Shikárpur, and on the south by parganah Kándhla and partly by parganah Bhukarheri. According to the census of 1872 this parganah had, then, a total area of 101 square miles and 128 acres, of which 71 square miles and 378 acres were under cultivation. The area assessed to Government revenue during the same year was 98 square miles and 480 acres, of which 69 square miles and 320 acres were cultivated, 13 square miles were culturable, and 16 square miles and 160 acres were barren.

Physical features.

This is one of the best parganahs in the district. The Karsuni or Krishni river in the centre and the eastern Jumna canal on the west run through Shámli from north to south. To the east of the Krishni, the villages about Banti Khera on the north have a poor soil and scanty irrigation, whilst on the south, near Kairána, the soil is extremely fertile and earthen wells are practicable. To the west of the Krishni the villages grouped about the canal are naturally fertile, though the soil is adapted in each set for different crops. A fair road runs from Thána Bhawan southwards through Shámli to Kairána. There are also roads to Muzaffarnagar, Budhána, Ailam, and Bidauli. The drainage near Saláwar has been improved by a cut into the Krishni. The inhabitants are chiefly Játs living in large village communities. At the last settlement canal irrigation covered 10,086 acres in 20 villages; in 1862 it rose to 15,615 acres in 24 villages, and in 1872-73 to 10,534 acres. Mr. Cadell writes that this parganah, like Thána Bhawan, is marked by deterioration from over-irrigation on the west coupled

with a want of irrigation on the east, especially to the north. Mr. A. Colvin formed the new settlement of this parganah in 1862.[1] The transfers during the period of the lapsed settlement (1841-61) amounted to about one-fifth of the whole area: and the price paid at sales by order of the civil court averaged six times the land-revenue; whilst in private transfers as much as eleven years' purchase was obtained. 10,317 acres passed by private and forced sale and 3,189 acres were confiscated for rebellion, or together 20·75 per cent. of the total area. Owing to the minute sub-division of the proprietary right as population increases, the sharers must mortgage and eventually sell their holdings and fall into the position of cultivators. Játs were the principal losers to the extent of 6,821 acres; next to them come Bilúches, Brahmans, Shaikhzádahs, and Mahájans. At the same time Játs were considerable purchasers, but Mahájans, Khatris, Bohras, and Káyaths were the principal buyers. Mahájans and Khatris alone purchased 5,339 acres.

Land-revenue.

The following statement shows the statistics of the land-revenue at the past and present settlements :—

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres	Acres	Acres.	Acres.	Acres.	Rs.	Rs a. p.
1848 ...	65,018	9,798	1,022	8,446	10,086	35,666	45,752	1,20,316	2 10 0
1862 ...	64,767	11,191	922	7,199	31,223	14,232	45,455	1,20,057	2 10 3

The land-revenue for 1872, according to the census returns, amounted to Rs. 1,21,479 (or with cesses, Rs. 1,40,582), falling at a rate of Re. 1-14-0 per British acre on the total area, at Re. 1-14-9 per acre on the area assessed to Government revenue, and at Rs. 2-0-5 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 2,80,524.

Population.

According to the census of 1872, parganah Shámli contained 55 inhabited villages, of which 12 had less than 200 inhabitants; 15 had between 200 and 500; 11 had between 500 and 1,000; 10 had between 1,000 and 2,000; 4 had between 2,000 and 3,000; and 2 had between 3,000 and 5,000. Shámli alone had over 5,000 inhabitants. The settlement records show that there were 77 estates on the register in 1863. The total population in 1872 numbered 55,876 souls (25,348 females), giving 553 to the square mile. Classified according to religion, there were 46,529 Hindús, of whom 21,059 were females; and 9,347 Musalmáns, amongst whom 4,289 were females. Distributing the Hindu population amongst the

[1] Mr. Cadell recommended only 18 estates for permanent settlement in this parganah.

four great classes, the census shows 4,818 Brahmans, of whom 2,198 were females; 819 Rajpúts, including 326 females; 4,151 Baniyas (1,873 females); whilst the great mass of the population is included in "the other castes" of the census ruturns, which show a total of 36,741 souls, of whom 16,662 are females. The principal Brahman sub-divisions found in this parganah are the Gaur (4,349), Kanaujiya and Dakaut. The Rajpúts, for the most part, belong to the Bisen and Chandrabansi clans, and the Baniyas to the great Agarwál (4,142) sub-division. Amongst the other castes, the most numerous are the Budhi, Kahár, Chamár, (6,165), Garariya, Juláha, Kumhár, Hajjám, Sonár, Jogi (1,171), Máli (1,531), Khákrob (2,587), Ját (11,947), and Gújar (793). Musalmáns comprise Shaikhs (8,568) and Sayyids (149).

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 636 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 2,517 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,912 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals, or goods; 7,115 in agricultural operations; 3,031 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 395 persons returned as labourers and 727 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 328 as landholders, 17,776 as cultivators, and 37,772 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 855 males as able to read and write out of a total male population numbering 30,528 souls. Shámli was formed out of the old Akbari parganah of Kairána in the reign of Jahángír, who bestowed it upon Hakím Mukarrab Khán. It remained in his family until it was resumed by Bahádur Sháh, and since then has formed a separate tappa which in course of time acquired the name of a parganah. In 1816 it comprised 21 villages and 24 estates, and in 1840-41 it received one village from parganah Nakúr and three villages from parganah Thána Bhawan, in the Saháranpur district, assessed at Rs. 7,780. Parganah Banat was subsequently added to it, and the united parganahs are often known as Shámli-Banat to the present day.

SHIKÁRPUR, a parganah of the Budhána tahsíl of the Muzaffarnagar district, is bounded on the north by parganah Baghra; on the north-west by parganah Shámli; on the north-east by parganah Muzaffarnagar; on the east and south-east by parganah Khátauli, and on the south by parganah Budhána. According to the census of 1872, this parganah had a total area of 100 square miles and 128 acres, of which 74 square miles and 134 acres were under cultivation.

The area assessed to Government revenue during the same year was 98 square miles and 429 acres, of which 73 square miles and 448 acres were cultivated, 12 square miles and 608 acres were culturable, and 12 square miles and 416 acres were barren.

Physical features.

The western portion of the parganah is intersected by the Hindan, and the Káli forms the eastern boundary. The high land of the Duáb between them slopes down on each side towards the rivers, and is entirely dependent on the rains for irrigation. The slope where the high land merges into the *khádir* or river-bed is much cut up with ravines on both sides and in the *khádir* of the Káli, the presence of *reh* and occasional loss by over-saturation in seasons of heavy rain are drawbacks that are more than compensated by the certain crops of sugar and rice that are produced there. In the uplands, the soil consists of a rich loam traversed by two belts of sand running southwards though Mubárakpur to the Káli *khádir*, which add to the natural aridity of the soil. Irrigation from wells, except in this sandy tract, is practicable and general. This tract is inhabited by a *chaurási* of the Baliyan Játs, a *bárah* of Tagas and the Saini colony of Sháhpur. The proprietors are chiefly Játs, Tagas, and Patháns. The trans-Hindan tract, known as Shikárpur proper, consists of eighteen Ját estates. The level upland is nearly of unvarying excellence, the *khádir* is good, and the slope towards the lowlands contains the only positively inferior soils. Irrigation from masonry and earthen wells was known long before the introduction of the canal, and here canal-irrigation does not seem to have been required. Mr. Cadell writes:—"The extension of canal irrigation to this tract must have been due more to the desire of the canal department to substitute canal for well-irrigation and to collect high water-rates from an industrious population, than to any wish to improve the cultivation of the tract. Indeed, in the estates to the south, in which water is most required, the supply is so uncertain that the rajbaha (Kalarpur) is of little use." Out of the 59 villages constituting the parganah in 1862, Mr. T. Plowden formed the old settlement of 24 villages that belong to the Sardhana jágír; another portion of the parganah was settled by Sir H. M. Elliot, and the remainder by Mr. E. Thornton. The revision of settlement was made by Mr. H. Keene. Mr. Cadell examined the parganah with a view to the permanent settlement, and could only recommend eight estates as coming within the prescribed conditions. The parganah is fairly assessed, and, as far as possible, the burden of taxation has been equalised. The industrious Ját communities were relieved from the undue share of the revenue that had previously been levied from them, and in regard to their villages Mr. Keene writes:—"Not only in this, but in most parganahs that I have had to deal with, I have found officials recommending high assessments on particular estates simply and solely because they were held by wealthy individuals or by industrious tribes; while

the malguzárs, for their part, lay great stress on their want of capital and other personal disadvantages. Each class seems disposed to regard the land-revenue as a kind of income-tax rather than what it really is—the landlord's rent. Doubtless the hereditary claims of the malguzárs form a source of sentimental influence which is hard to resist, but it cannot be indulged beyond the limits imposed by the alternative necessity of allowing a malikána. Otherwise, we must by parity of reasoning, be driven to place an exorbitant demand on estates where they happen to be held by persons of more than usual energy and enterprise, which is equivalent to the manifest absurdity of treating penally the exhibition of merit and resource. Hence in the Soron sub-division of this parganah I have sacrificed many small increments which were recommended to me, having regard to the 'casual variations' of Mr Bird." The transfers from 1841 to 1861 were very heavy, amounting to 16,485 acres, or including confiscations to 16,742 acres, equivalent to 26 per cent. of the total area. The industrious Játs parted with 9,601 acres; Afgháns lost 4,008 acres; Mahájans 1,624, and Tagas 711 acres. The Játs re-purchased one-half their losses and the Afgháns and Tagas a portion of theirs, but the lion's share, as usual, fell to the Mahájans, who became owners of 7,465 acres.

Land-revenue.

The following statement shows the statistics of the land-revenue at the past and present settlements:—

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
1848, ...	63,799	10,867	1,980	6,999	...	...	43,953	1,06,052	2 6 7
1862, ...	64,015	8,487	1,118	5,923	21,208	27,279	48,487	1,03,301	2 2 1

The land-revenue for 1872, according to the census returns, amounted to Rs. 1,05,020 (or with cesses, Rs. 1,21,309), falling at a rate of Re. 1-10-2 per British acre on the total area, at Re. 1-10-7 per acre on the area assessed to Government revenue, and at Rs. 2-3-5 per acre on the cultivated area. The sum paid by cultivators to the landowners as rent and cesses during the same year has been estimated at Rs. 2,05,760.

Population.

According to the census of 1872, parganah Shikárpur contained 51 inhabited villages, of which 5 had less than 200 inhabitants; 17 had between 200 and 500; 10 had between 500 and 1,000; 12 had between 1,000 and 2,000; 3 had between 2,000 and

3,000; and 4 had between 3,000 and 5,000. The settlement records show that in 1863 there were 72 estates on the register. The total population in 1872 numbered 52,329 souls (24,108 females), giving 523 to the square mile. Classified according to religion, there were 39,012 Hindús, of whom 17,712 were females; 13,317 Musalmáns, amongst whom 6,396 were females. Distributing the Hindu population amongst the four great classes, the census shows 3,299 Brahmans, of whom 1,501 were females; 246 Rajpúts, including 117 females; 3,579 Baniyas (1,614 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 31,888 souls, of whom 14,480 are females. The principal Brahman sub-divisions found in this parganah are the Gaur (4,304) and Sarwariya (143). The Rajpúts belong for the most part to the Kachhwáha clan, and the Baniyas to the Agarwál (2,758) and Chhoti Saran (684) sub-divisions. The principal divisions of the other castes are the Kahár, Taga (2,750), Chamár, (5,770), Garariya (1,331), Juláha, Kumhár, Hajjám, Sonár, Lohár, Jogi, Máli, Khákrob (1,985), Ját (6,862), and Saini (713). The Musalmáns comprise Shaikhs (12,132) and Sayyids (295).

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 712 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 1,671 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,645 in commerce, in buying, selling, keeping or lending money or goods, or the conveyance of men, animals or goods; 7,147 in agricultural operations; 2,713 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 3,106 persons returned as labourers and 549 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 2,970 as landholders, 16,667 as cultivators, and 32,692 as engaged in occupations unconnected with agriculture. The educational statistics, which are apparently imperfect, show 1,582 males as able to read and write out of a total male population numbering 28,221 souls. Shikárpur represents portions of the old Akbari parganah of Khúdi. The name Khúdi is the old name of the town of Shikárpur and is supposed to be the name of the Raja who founded it. Soron or Shoron, which contained six villages in 1816, was subsequently added to it, and the united parganahs are now sometimes known as Soron-Shikárpur.

Thana Bhawan, a town in parganah Thána Bhawan of the Muzaffarnagar district, is distant 18 miles from Muzaffarnagar. The population in 1847 was 11,221, in 1853 was 11,474, and in 1865 was 8,481. In 1872 there were 7,486 inhabitants, of whom 3,858 were Hindús (1,781 females) and 3,628 were Musalmáns

(1,837 females), chiefly Shaikhs. These figures show a steady decrease in the population. The town has a good number of brick-built houses and is well opened out by four roadways meeting in a central point which forms an open *chauk* or market-place, where the grain-dealers reside. The site is raised and lies between the country irrigated on the west by a branch of the eastern Jumna canal and the lowland of the Krishni nadi on the east, which forms the drainage line. In former times, the houses extended quite as far as the banks of the nadi. The water in the principal well was twelve feet from the surface in March, 1869, and in the rains it rises to six feet. In some places the water is almost at the surface during the rains. As a rule, the water is good, but often in the rains it is covered with an oleaginous matter. There are many ruined houses about Thána Bhawan, and many decayed Musalmán families reside here. The Hindús have a temple in the Bhawan sacred to Devi, which is visited by people from a distance. There is a first-class police-station and a branch post-office here. The Chaukidári Act (XX. of 1856) is in force, and in 1872 supported a village police numbering 28 men of all ranks at an annual cost of Rs. 1,644, besides a staff of sweepers. The total income during 1872-73 amounted to Rs. 3,254, giving an incidence of Re. 0-5-6 per head of the population and Re. 1-8-4 per house. The number of houses assessed was 1,812 and the expenditure was Rs. 2,542. The township contains 14,200 bíghas, of which 9,700 were under cultivation in 1867. The soil is light and sandy, sand at twelve feet from the surface, and below it clay. Vegetables and a little rice are grown near the town, and the spring crops are wheat and gram. There are some mango and acacia trees in the neighbourhood.

The site.

Thána Bhawan was known as Thána Bhím during the reign of Akbar, but that name has long given place to the present one, so called after the celebrated temple of Bhawáni Devi, still a place of considerable resort. Najábat Ali Khán, ancestor of the Kázi who was so notorious during the mutiny, was the Kázi at the British occupation in 1803, and was made by them a tahsíldár, but the outcry of the whole parganah soon led to his dismissal. He was an active purchaser of the title-deeds of dispossessed assignees of the Government revenue, as his power and influence enabled him to recover possession of what they had been unable to preserve. He purchased several villages at auction-sale for arrears of revenue, and altogether was one of the most resolute and powerful landholders in the district. Mr. Thornton, in his report, mentions how he brought into order the village of Riúni, which had been sold for arrears, and was inhabited by a community of Rajpúts, "who resisted all attempts to impose the amount of revenue due for their large and valuable village, and were also notorious as thieves: the fear of them had half depopulated the surrounding villages;" but they succumbed to their new master.

History.

The mutiny.

Thána Bhawan was a centre of disaffection during the mutiny, when the Shaikhzádahs headed by their Kázi, Mahbúb Ali Khán, and his nephew Ináyat Ali, broke into open rebellion. Their most daring feat was the capture of the Shámli tahsíl and the massacre in cold blood of 113 men who defended it (14th September, 1857). Mr. Edwards, the Magistrate, being reinforced by some Sikh and Gúrkha levies, shortly afterwards determined to attack Thána Bhawan, and thus describes his operations :—"On our approaching the place, large bodies of men were seen drawn out in the mango groves and behind the high-standing crops; the artillery opened fire and speedily dispersed them. The guns, however, could not do much, owing to the view being obstructed by the gardens and trees up to the very walls. Some Gúrkhas and Sikhs were next sent out as skirmishers to clear the cultivation, which they effected. It was at this period that Lieutenant Johnstone, commanding the Sikhs, was wounded by a musket ball in the arm and obliged to go to the rear. After a time, finding that the skirmishers were unable to keep down the fire of the town, the rebels firing from behind walls, the skirmishers were directed to be withdrawn; the force then moved more to the left where the ground was clearer, and the horse artillery again opened fire, but finding after a few rounds that little or no effect was produced, the rebels keeping under cover, the guns were withdrawn. "A storming party of the Sikhs and Gúrkhas—the former under Captain Smith, the latter under Lieutenant Cuyler—were directed to advance and storm the town. The party did as directed under a smart fire of musketry, and after clearing and taking possession of several detached buildings which were keenly contested, charged over the wall into the town and got possession of two guns, which they held for some time, but losing a number of men, and the supports failing to come to their aid, they were at length obliged to return, leaving the captured guns behind as there were no means of removing them. The artillery fired a few shots into the town which were not replied to, and we then retired. The musketry fire from the walls of the town and loop-holed houses was very heavy, and our men, dropping all around, shot by enemies whom they could not even see, became dispirited. We were engaged for nearly seven hours, and the men were thoroughly exhausted. The town, which was surrounded by a wall and ditch and has eight gates, is naturally a strong one, and the great number of its defenders, elated with their late success at Shámli, rendered all our efforts vain. Our loss was heavy: 17 killed and 25 wounded, including Captain Smith and Lieutenant Johnstone. The line of baggage, when we were retiring, was attacked by a large party of horse and foot near the village of Kheori; they were at once charged in gallant style by two detachments of the 1st Panjáb Cavalry, one led on by S.S. Melville, Esq., C.S., and the other by M. Low, Esq., C.S., who was severely wounded, receiving three sword-cuts, while his horse was also much cut.

The insurgents fled in utter disorder and were cut up by the cavalry, to the number of about 100, the rest escaped through the high crops. We met with no further opposition on the road." Recalled by orders, Mr. Edwards was obliged to fall back on the civil station, but shortly afterwards, being joined by a force from Meerut under Major Sawyer, he again proceeded against Thána Bhawan. The force on arriving at the place found the town deserted, and so it remained until the middle of October, when it was again visited by the flying column. "So great was the fear entertained by the people of the Shaikhzádahs that no one would give information" against the leaders of the rebellion. Ample evidence was subsequently secured, and they met with their deserts. The wall of the town and the eight gates were levelled to the ground, and from October no further disturbance took place.

THÁNA BHAWAN, a parganah of the Shámli tahsil of the Muzaffarnagar district, is bounded on the north by the Saháranpur district; on the west by parganah Jhanjhána; on the east by parganah Charthawal, and on the south by parganah Shámli and partly by parganah Baghra. According to the census of 1872 this parganah had, then, a total area of 89 square miles and 627 acres, of which 53 square miles and 518 acres were under cultivation. The area assessed to Government revenue during the same year was 75 square miles and 378 acres, of which 45 square miles and 352 acres were cultivated, 16 square miles and 480 acres were culturable, and 13 square miles and 186 acres were barren.

Physical features.

Thána Bhawan is intersected on the west by the eastern Jumna canal and on the east by the Krishni nadi, both of which have a course from north to south. The distinction between the tracts to the east and west of the river is very marked. The banks of the river are high, and the tract to the east is so raised that there are few wells and little irrigation. The country is open, with a sparse population and thin cultivation. To the west population is dense and cultivation close. The soil here, too, is naturally good and the means of irrigation plentiful. Wheat is the principal crop, occupying 48 per cent. of the cultivated area, and rice of a good quality is grown in a few villages. Mango groves are common along the canal, and there are a few *dhák* patches in the north-west of the parganah and a few scattered clumps of acacias. On either side of the canal large, patches of *usar* occur throughout the whole parganah. Mr. Cadell describes the eastern tract as one possessing few natural advantages. "The soil is of fair quality, but the sinking of earthen wells is difficult and expensive; the cultivators, too, are for the most part Rajpúts, whose progress has not been rapid. It might have been thought that this was the tract in which, above all others, canal water would have been most useful and was most certain to be given, but although the once frequent earthen wells to the west of the river have long since been closed by the

canal, and although the neighbourhood to the east was well supplied with masonry wells, yet the canal department has carefully avoided the tract which most required its aid, and has lavished canal water in needless profusion over a fertile country which hardly wanted help. The consequence is that, while reh and swamps are doing much injury beyond the Kirsuni, and while the rajbaha to the east irrigates large tracts fully secured by masonry wells, the dry and arid tract in the middle of the parganah has been left without that share of canal irrigation which it so much requires." A line of revenue-free villages runs across the parganah owned by Shaikhs, Bilúches, and Marhattas, but there were very many more in existence before the mutiny.

Fiscal history.

Mr. Thornton made the settlement of this parganah when it was in the Saháranpur district. His assessment expired in 1861, and the revision was made by Mr. A. Colvin.[1] During the currency of the old settlement the recorded transfers amount to 5,690 acres and hardly exceed one-seventh of the total area. Excluding the area in which money-lenders were themselves the vendors, this class has succeeded in becoming proprietors of one-half of the area transferred, or one-fourteenth of the total area. Rajpúts were the principal losers by sales, to the extent of 2,277 acres, and Mahájans and Khatris purchased 3,590 acres. Land at forced sales fetched about six times the annual land-revenue and at private sales seven times. In addition to the transfers noted above, 7,536 acres were confiscated on account of rebellion, chiefly held by Musalmán grantees and others around Thána Bhawan. The prevailing castes are Játs and Rajpúts with a good sprinkling of Shaikhs and Patháns. The following statement gives the statistics of the land-revenue :—

Year.	Total area.	Barren.	Revenue-free.	Culturable.	Cultivated.			Revenue.	Incidence of revenue on cultivated acre.
					Irrigated.	Dry.	Total.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs. a. p.
1848 ...	55,997	4,764	10,254	11,618	...	...	30,361	56,244	1 13 7
1862 ...	57,590	9,242	8,910	11,746	19,698	7,994	27,692	57,081	2 0 11

The land-revenue for 1872, according to the census returns, amounted to Rs. 57,985 (or with cesses, Rs. 68,945), falling at a rate of Re. 1-0-1 per British acre on the total area, at Re. 1-3-2 per acre on the area assessed to Government revenue, and at Re. 1-10-11 per acre on the cultivated area. The sum paid by cultivators to the land-owners as rent and cesses during the same year has been estimated at Rs. 1,40,570.

[1] Mr. Cadell recommended only 12 estates in this parganah for permanent settlement.

Population.

According to the census of 1872, parganah Thána Bhawan contained 51 inhabited villages, of which 12 had less than 200 inhabitants; 17 had between 200 and 500; 16 had between 500 and 1,000; 3 had between 1,000 and 2,000, and one had between 3,000 and 5,000. The towns containing more than 5,000 inhabitantas are Thána Bhawan and Jalálabad. The settlement records show that 64 estates were on the register in 1863. The total population in 1872 numbered 41,928 souls (19,473 females), giving 466 to the square mile. Classified according to religion there were 27,310 Hindús, of whom 12,230 were females; and 14,628 Musalmáns, amongst whom 7,243 were females. Distributing the Hindu population amongst the four great classes, the census shows 2,494 Brahmans, of whom 1,109 were females; 2,212 Rajpúts, including 863 females; 2,753 Baniyas (1,243 females); whilst the great mass of the population is included in "the other castes" of the census returns, which show a total of 19,851 souls, of whom 9,017 are females. The principal Brahman sub-division found in this parganah is the Gaur, numbering 2,335 souls in 1872. The Rajpúts, for the most part, belong to the Gaur (491), Pundír and Gaharwár clans, and the Baniyas to the Agarwál (2,653) sub-division. The most numerous and influential of the other clans are the Budhi, Kahár, Taga (120), Chamár (4,996), Gararíya, Juláha, Kumhár, Máli, Khákrob (1,434), Ját (933), Saini (1,655), and Rorh (784) castes. The Musalmáns are the most powerful of all and comprise 12,153 Shaikhzádahs, 429 Sayyids, and 129 Patháns.

Occupations.

The occupations of the people are shown in the statistics collected at the census of 1872. From these it appears that of the male adult population (not less than fifteen years of age), 409 are employed in professional avocations, such as Government servants, priests, doctors, and the like; 2,088 in domestic service, as personal servants, water-carriers, barbers, sweepers, washermen, &c.; 1,449 in commerce, in buying, selling, keeping or lending money or goods; or the conveyance of men, animals, or goods; 4,382 in agricultural operations; 2,597 in industrial occupations, arts and mechanics, and the preparation of all classes of substances, vegetable, mineral, and animal. There were 3,004 persons returned as labourers and 488 as of no specified occupation. Taking the total population, irrespective of age or sex, the same returns give 321 as landholders, 11,099 as cultivators, and 30,508 as engaged in occupations unconnected with agriculture. The educational statistics, which are confessedly imperfect, show 1,092 males as able to read and write out of a total male population numbering 22,455 souls. The parganah is known in the *Ain-i-Akbari* under the name of Thána Bhím, but the name Thána Bhawan has been fixed for a long time. In 1840-41 the parganah was broken up: 28 villages were transferred to other parganahs, and the 44 villages remaining formed the nucleus of a new parganah, to which

was added one village each from parganahs Saháranpur and Deoband, three from Gangoh, two from Chaunsat Kheri, and three from Nánauta, making 54 villages in all, assessed at Rs. 47,228. Of the villages transferred, Charthâwal, received 15 ; Baghra, 4 ; Gordhanpur, 1 ; Jhanjhána, 5 ; and Shámli, 3.

TISANG, a large village in parganah Shikárpur of the Muzaffarnagar district, is distant 17 miles from the civil station. The population in 1865 numbered 1,800 souls, and in 1872 there were 1,967 inhabitants, of whom a great proportion were Musalmáns. The zamíndár is a Sayyid and has recently built a new *masjid*. The site is somewhat raised, but on the north is a large depression known as the *jhíl*, which carries off the drainage of the surrounding country for some miles. There are two good brick-built wells in the village in which the water is eighteen feet from the surface with a depth of fifteen feet. There is a small bazar here where supplies may be obtained. For some years there has been considerable sickness in the village: much of this must be due to the want of cleanliness, which appears to be characteristic of the villages in this district. Imdád Husain of Tisang obtained Jaula as a grant for services during the mutiny. Tisang was founded by Sayyid Hizabr Khán of the Kúndliwál branch of the Bárha Sayyids, who died in 1047 H. (1637 A.D.) His son was Zabardast Khán, and his brother was Sayyid Alam, who perished with the unfortunate Prince Shuja in Arakan.

GLOSSARY OF VERNACULAR TERMS USED IN THIS VOLUME.

A.

Abwábs, cesses.
Agla, a soil, 8.
Alsi, linseed.
Amaltás, the *Cassia fistula*.
Anwári, the Indian mullet. *Mugil corsila*.
Arhar, the edible grain, *Cajanus Bicolor*.
Asárh, the Hindu month corresponding to June-July.
Athbárya, a caste of money-lenders, 495.

B.

Babul the *Acacia Arabica*.
Bachuwa, a species of fish.
Badhua, a species of fish.
Bájra, the *Penicillaria spicata*.
Bakra, a species of fish.
Ba-kund, a term used in division of crops, 74.
Bám, an eel.
Band, an embankment.
Bángar, the uplands of the Duáb.
Bansi, a fishing rod.
Bárah, a soil, 8.
Barha, a soil, 8.
Batái, division of crops.
Báwan, a cluster of 52 villages
Bayár, an agricultural term, 247.
Bedan, rinderpest, 19
Ber, the *Zizyphus jujuba*.
Bekrúra, a species of fish.
Bhamarjál, a fishing-net. 20.
Bhaosúra, a species of fish.
Bhanwar, rapids or eddies, 210.
Bháyachára, a kind of tenure, 203.
Bheriya, a wolf.
Bhúr, a kind of soil, 7.
Bígha, a measure of land.
Binaula, cotton-seed.
Biswa, a measure of land.
Biswadárs, under-proprietors.
Biswánsi, a measure of land.
Boáli, a species of fish.
Bolár a species of fish.

C.

Chalísa, the famine of 1840 *Sambat*.
Cholawa, a species of fish.
Charas, preparation of hemp (*Cannabis Sativa*)
Chari, stalks of *joár*, used as fodder.
Chauk, a central space in a town used generally as a market-place
Chauki, guard-house.
Chaukrâyat, a town-beadle, 426.
Chaulái, a species of *Amaranth*.
Chhaták the sixteenth part of a seer.
Chormár, title given to a Gújar leader, 65.
Chilwa, a species of fish.

D.

Dábh, a species of grass, 137.
Dákra, a kind of soil, 7.
Dál, split pulse.
Dám, the twentieth part of an Akbari rupee.
Dhák, the *Butea frondosa*.
Dhatura, the *Datura alba*.
Dhenkli, a lever-well.
Dofasli, extra crops grown on land which has already borne one crop in the same year.
Dúa, a species of mustard.
Duhar, low marsh-lands.
Dúmat, loam.

E.

Ek-fasli, one-crop land.

F.

Farás, the tamarisk.
Fasli, the agricultural year.

G.

Ganda, a lixiviating trough, 36.
Gaon, a village.
Gariyál, the long-nosed alligator.
Ganj, a market-place.
Gaz, a yard measure.
Ghát, a ferry.
Ghi, clarified butter.
Ghopar, a species of fish.
Ghúr, a species of fish
Gira, the sixteenth part of a *gaz*.
Got, a sub-division of a clan.
Gotra, a sub-division of a clan.
Guftár, a hyena.
Gúl, a small canal distributary.
Gúlar, the *Ficus glomerata*.
Gúr, a preparation of sugar.

H.

Hara, a species of timber.
Haráwal, the van of the army, 596.
Háth, a measure, a cubit.
Henga, a harrow.
Hijri, the date of Muhammad's flight from Mecca.
Hiran, an antelope.

I.

Imli, the *Tamarindus Indica*
Indráyan hislombha, the colocynth gourd.
Istimrári sanad, a grant in perpetuity.

J.

Jaedád, land granted on military service.
Jágír, a grant of land
Jamálgota, the *Croton tiglium*.
Jáman, the *E genia Jambolanum*.
Jawás i, a species of tamarisk.
Jozáil, a large gun or wall-piece.
Jhán, the tamarisk.
Jhíqan, a species of timber.
Jhíl, a natural reservoir of water.
Jhínga, a prawn
Joár, the *Holcus sorghum*.

K.

Káladána, the *Pharbitis nil*.
Kallar, salt-infected marsh, 35.
Kan, batái, terms used in division of produce, 74,
Kás, the *Saccharum spontaneum*.
Katírna, a species of fish.
Kath Karaunja, the *Guilandina Bonduc*.
Khádir, low alluvial land along the bed of a river.
Khádir matti, alluvial soil.
Khákí, unirrigated land.
Khári boli, a dialect, 51.
Khár, sulphate of Soda, 34.
Kharíf, rain-crops.
Khar pakka, foot and mouth disease.
Khala-ki-zamín, 202.
Kheral, a species of fish.
Khera, a mound, usually a deserted site.
Khilat, a dress of honor.
Khirní, the *Mimusops Kanki*.
Kíkar, the *Acacia Arabica*.
Kodo, the *Paspalum scrobiculatum*.
Kuchcha, as applied to roads and wells means unmetalled, without masonry.
Kusa, a grass.
Kusum, safflower (*Carthamus tinctorius*).
Kút, a term used in division of produce, 74.
Kyári, a solar evaporating pan, 36.

L.

Lahsora, the *Cordia myxa*.
Lanchor, a species of fish.
Lánchi, a species of fish.
Lâo, a run at a well.
Lobiya, the *Dolichos Sinensis*.

M.

Madár, the *Calatropis gigantea*.
Mahásar, a species of fish.
Maháwat, the winter rains.
Mahua, the *Bassia latifolia*.
Majhola, a class of soil, 8.
Magar, the snub-nosed alligator.
Mardána, the men's apartments.
Mandua, the *Eleusine corocana*.
Másh, the *Phaseolus Roxburghii*.
Masjid, a mosque.
Masúr, the *Ervum Lens*.
Mattyár, a clay soil.
Maurúsi, hereditary.
Moth, the *Phaseolus aconitifolius*.
Mour ka anáj, an agricultural phrase, 298.
Mush, a species of fish.
Mondal, a species of fish.
Mukaddam, a head-man of a village.
Mukarari, a tenure held on a fixed revenue.
Mukararidár, the holder of a *mukarari*.
Munda, a class of soil, 8.
Múng, the *Phaseolus mungo*.
Mutizla, a mash for cattle, 19.

N.

Náká, a man-eating alligator, 18.
Nankár, an allowance as maintenance.
Nareni, a species of fish.
Nilgái or Aujh, the *Portax pictus*.
Nim, the *Azadirachta Indica*.
Nimak-harám, a scoundrel, false to the salt.
Nisfi, half share in division of produce, 76.

P.

Pahikáskt, cultivators not resident in the village in which they cultivate.
Panaya, a species of fish.
Parhal, a kind of timber.
Patra, a species of fish.
Patti, a sub-division of a village.
Pattídári, a land-tenure.
Pilíya, a kind of soil like *pilota*, 7.
Pilota, a kind of soil, 7.
Pípal, the *Ficus religiosa*.
Púnchi, tail-money for grazing, 5.
Púla, a bundle of thatching grass, 102.
Purimahi, a species of fish.

R.

Rabi, the spring or cold-weather crops.
Radherajál, a large fishing-net, 20.
Rajbaha, a canal distributary.
Ras, brine of lixiviation, 37.
Ruti, a weight.
Rausli, a kind of soil.
Reh, impure carbonate of soda.
Rendi, castor bean.
Rizka, lucerne grass.
Rohu, the Indian carp.
Ruhel, a species of fish.

S.

Sajjimatti, impure carbonate of soda.
Sál, the *Shorea robusta*.
Sanad, a grant or patent.
Sanwat, the Hindu era.
Sarson, Indian mustard.
Saulíya, a species of fish.
Sáwan, the Hindu month corresponding to July-August.
Sáwank, the *Oplismenum frumentaceum*.
Ser, a weight equal to 2·057 lbs. avoirdupois.
Sharah nakdi, a tenure, 551.
Sheg mahi, a species of fish.
Shikk, a division of a subah.

Shísham, the *Dalbergia Sissoo*.
Shora, salt-petre.
Shor, salt-infected marsh.
Scota, a kind of soil, 4.
Sihí, a porcupine.
Singhára, water-caltrop, *Trapa bispinosa*.
Siras, the *Albizzia speciosa*.
Sirwal, a river-weed.
Sisú, the *Dalbergia sissoo*.
Solar, a species of fish.
Somwáti amáwas, see page 173.
Subahdá í, the fief of a subahdár.
Sudder Málguzár, the principal person who engages with Government for the land revenue on behalf of the village community.

T.

Taiúl Sháhi, lands assigned for the privy purse of the kings of Delhi.
Takhallus, a nom-de plume.
Takkávi, agricultural advances.
Talukadári, the holding of a talukadár.
Tangan, a species of fish.
Tápa, a species of fish.
Tára, a species of oil-seed.
Tarái, low-lying, moist land.
Thangdár, a receiver of stolen property.
Thára, a term used in division of produce, 74.
Tila, a mound or hill.
Tún, the *Cedrela toona*.

U.

Urd, the *Phaseolus radiatus*.
Urs, a Musalmán religious gathering.
Usar, a barren unculturable soil.

Z.

Zabti, cash-rates for particular crops.
Zamíndári, the holding of a zamíndár.
Zamíndár, a landholder.
Zanána, the womens' apartments.

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ERRATA.

Errors in accentuation have not been corrected in this table, which completes the final revision to the end of the Bulandshahr District.

Page 13, line 2 from top, *for* "are" *read* "is."

„ 23, line 14 from top, *for* "10,761 total of irrigated area in Khúrja," *read* "10,661."

„ 23, line 20 from top, *for* "17,292 total of irrigated area in Pahásu," *read* "18,292."

„ 25, line 2 from top, *for* "*siághára*," *read* "*singhára*."

„ 25, line 19 trom top, *for* "*maháwut*," *read* "*maháwat*."

„ 31, line 23 from top, *for* "Tibegampur," *read* "Tilbegampur."

„ 52, line 18 from top, omit Bulandshahr and Khúrja.

„ 52, line 22 from top, *for* "6,955," *read* "6,959."

„ 52, line 23 from top, *for* "135," *read* "166."

„ 53, last line, *for* "Chaudera," *read* "Chaundera."

„ 59, line 13 from top, *for* "70, 78, 421, collections in 1868-69," *read* "10, 78, 421."

„ 71, line 21 from top, *for* "477 total of portions of villages still held by original proprietors," *read* "467."

„ 72, last column of table, *for* "311-6-2," *read* "411-6-2."

„ 72, last column of table, *for* "434-0-0," *read* "438-8-0."

„ 76, line 17 from top, *for* "finds its," *read* "find their."

„ 78, last line, *for* "22,23,007," *read* "22,23,206."

„ 88, line 5 from top, *for* "3,70,374," *read* "3,70,377."

„ 88, line 7 from top, *for* "21,67,933," *read* "21,69,933."

„ 90, line 5 from top, *for* "Englishman," *read* "Englishmen."

„ 105, line 34 from top, *for* "Bhísmak," *read* "Bhíshmak."

„ 112, total column of receipts 1871-72, *for* "6,945," *read* "6,946."

„ 112, total column of expenditure, *for* "6,132," *read* "6,102."

„ 116, line 18 from top, *for* "1,662," *read* "1,663."

„ 120, line 37 from top, *for* "asessment," *read* "assessment."

„ 128, total octroi in 1870-71, *for* "5,883," *read* "5,483."

„ 132, line 36 from top, *for* "39," *read* "37."

„ 140, line 2 from top, *for* "616," *read* "516."

„ 141, line 12 from top, *for* "3,257," *read* "3,267."

„ 152, last line of table, *for* "0-15-0 : 1-0-5 : 1-7-6, *read* "1-0-9 : 1-2-4 : 1-10-4."

Page 154, line 15 from top, *for* "13,303," *read* "1,303."
„ 155, line 2 from top, *for* "Chhainar," *read* "Chhaínsa."
„ 155, line 35 from top, *for* "east," *read* "west."
„ 159, line 5 from top, *for* "are," *read* "is."
„ 160, miscellaneous expenditure in 1871-72, *for* "139," *read* "238."
„ 171, line 1 from top, *for* "only two," *read* "five."
„ 171, line 2 from top, *for* "twelve," *read* "seven."
„ 171, first line of table, *for* "0-14-11 : 1-1-1¾ : 1-8-5," *read* "0-15-3 : 1-1-5 : 1-8-11."
„ 171, second line of table, *for* "1-9-9," *read* "1-9-6."
„ 177, line 33 from top, *for* "khaga," *read* "khági."
„ 178, line 18 from top, *for* "1844," *read* "1842."
„ 178, line 37 from top, *for* "details differ in census," *read* "Vol. I., pp. 210, 345."
„ 181, last line, *for* "15," *read* "13."
„ 182, first line, *for* "25," *read* "6."
„ 182, first line of table, *for* "0-12-4¾ : 0-14-1 : 1-9-9½," *read* "0-13-1½ : 0-14-11 : 1-11-4."
„ 190, last line, *for* "3,123, 2,044," *read* "3,723, 2,054."
„ 191, line 4 from top, *for* "Charásya," *read* "Chaurasiya."
„ 191, line 31 from top, *for* "51,685," *read* "48,685."
„ 193, line 6 from top, *for* "3,70,371," *read* "3,70,377."
„ 196, last line, *for* "200·09," *read* "2,200·09."
„ 309, line 13 from top, *for* "500," *read* "50."
„ 642, last but one, *for* "Mr. Elliot in Meerut," *read* "Mr. Thornton, in 1841."
„ 681, line 30 from top, *for* "Panhara," *read* "Paimora."
„ 689, line 26 from top, *for* "Kasári," *read* "Kasiára."
„ 695, line 33 from top, omit "called the Rawa."
„ 705, line 14 from top, *for* "Jakhrauda," *read* "Jarauda."
„ 723, line 14 from top, *for* "has," *read* "have."

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